

Suid-Afrikaanse Tydskrif vir Geneeskunde : South African Medical Journal

Kaapstad, 2 Mei 1959

Deel 33 No. 18 Volume 33

Cape Town, 2 May 1959

SHOULD PERIODIC REASSESSMENT BE CONSIDERED FOR THE CHRONICALLY DISABLED

ELIZABETH R. TURNER, S.R.N., M.A.O.T., Head of Department of Occupational Therapy, Groote Schuur Hospital, Cape Town*

Handicapped persons, though each has his own individuality, may be roughly grouped into the following categories, mostly according to achievement and work tolerance and the degree of limitation, physical or mental:

1. Those whose recovery permits them to return to their previous employment.
2. Those requiring re-training to fit their residual disability to a new job.
3. Those whose handicap prevents them from competing in the open labour market, and who require some type of sheltered employment.
4. The severely disabled, who are known as 'the home-bound'. This group can be subdivided into:
 - (a) Those who are immobile but have the use or a degree of use of their hands and, provided some suitable work is brought to them in the home, have a fair chance of making a small contribution to the family budget.
 - (b) The 'write-offs'—those whose handicap prevents them from any participation in daily living, who are utterly and completely dependent on others for their every need.

It is surely this last group which presents the most baffling problem to the medical rehabilitation team. There has been a steady development of these teams throughout South Africa. The problems set before their members are many and varied. To some of them there is no answer, others are challenging, and not a few have brought encouragement and reward to the team. It has been said that a crippled individual can be led to look at the stars, but he must be *led*.

The purpose of this article is to review a case who fell into the last of these categories, and who after careful and repeated reassessment has been *led out*.

CASE RECORD

Mrs. S.B., aged 41 years

Before World War II Mrs. B., then unmarried, had lived in a country district, not following any particular type of occupation until during the war she served in the Forces as a heavy transport driver. Towards the end of the War she married, had one stillborn child, and was later divorced because of her subsequent disability.

Some short time after the birth of the child, in 1944, she contracted poliomyelitis at the age of 27 years. The history was as follows:

On the 1st day the symptoms were associated with head-

* Now Occupational Therapist, Cape School for Cerebral Palsied Children, Rondebosch, Cape.

ache and running nose (she thought she was developing influenza) and on the 2nd day she complained of low back-ache.

Early on the 3rd day the right arm was paralysed. Later in the day further paralysis ensued in the following order: legs, left arm, neck, stuttering speech. No respiratory embarrassment.

The backache lasted and was constant and severe for about 3 weeks after onset of illness; pain of a burning nature in her arms ensued, but was even more severe in her legs, which were acutely painful to touch.

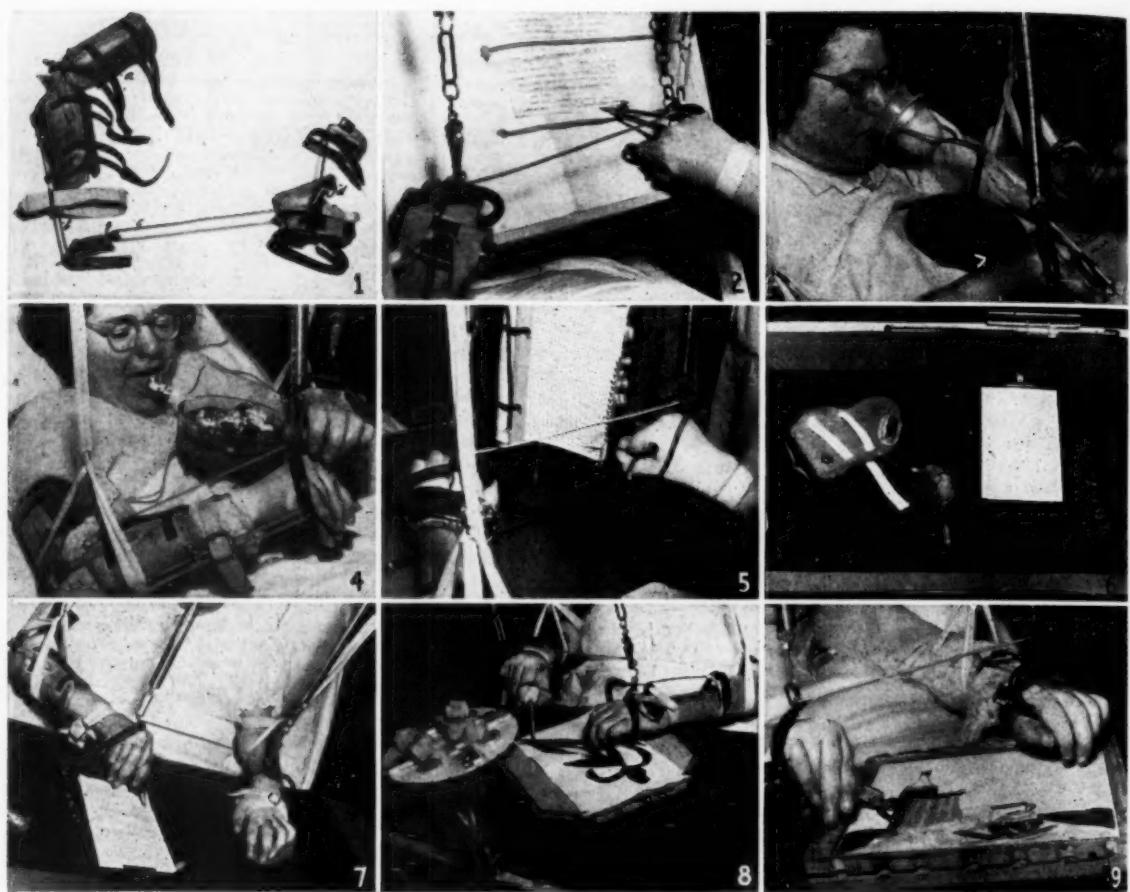
Five weeks from the onset all pain had disappeared. Hospitalization, during which time patient received physiotherapy and occupational therapy, was continued for 21 months in a Transvaal hospital. Apart from being able to sit when put in a chair, she was, on discharge, a completely helpless invalid, quite unable to move any limb or alter her position in bed by half an inch.

She was discharged to her home, which was in a small fishing village on the Cape coast. There she lay in bed for 7 years, looked after by her parents or a Coloured servant girl. No plan had been made for her to be reassessed medically. Her only source of income was a small Army pension. A transitory opportunity had once come her way to coach a few backward children from the local school, who were brought to her in her room. She was otherwise confined to reading as her only occupation. She had to have her book on a stand and so near to her that she could turn the pages with her tongue.

It was in this state in 1953 that the case was brought to the notice of the Cape Cripple Care Association, who negotiated her admission to Groote Schuur Hospital, Cape Town, where she was afforded the following periods of in-patient treatment: 23 August to 24 October 1953; 1 September to 7 November 1956; 29 June to 20 July 1957; 13 April to 8 June 1958.

Physicians and orthopaedic surgeons investigated her physical condition. Disuse atrophy in the non-affected muscle groups was present, and joint movements in all limbs were limited. Neither physician nor surgeon felt that anything could be done by them for the patient, and she was referred to the Department of Occupational Therapy, mostly with a view to fitting her with some automatic page-turning device.

The patient had made good adjustment to her handicap. She had faced the reality of her physical limitations, and her indomitable spirit had in no way suffered defeat. It was this spirit displayed by the patient which brought a challenge to the occupational therapist. Should the patient be dis-



charged from hospital once more with only a page-turning device? What of her future? What of her disuse atrophy? How could she be activated?

The patient's muscle evaluation chart read as follows:

Left Upper Limb. Trapezius—upper fibres work strongly, middle and lower fibres weakly. Pectoralis group strongly. Flexor carpi ulnaris weakly. Marked wasting, especially of palmar eminences. All other muscles in hand and limb—zero.

Right Upper Limb. Trapezius—upper fibres working, middle and lower fibres zero. All other arm muscles zero.

Right Hand. Main en griffe present. Opponens pollicis works strongly. Flexors of hand working, giving static flexion of fingers at metacarpo-phalangeal joints.

Lower Limbs. All muscles zero.

Trunk Muscles. These could not be tested accurately owing to hypersensitivity of the skin, but the patient was unable to sit up or move her trunk to change her position in bed.

Joints. Limited movement in elbow joints. Knee joints fixed in straight-leg position. Hip—only a few degrees of flexion possible, no abduction.

As this patient had by that time spent 7 years in bed,

with reading as her only activity, the occupational therapist felt that an automatic aid to page-turning was of secondary consideration, but that some means should be sought to activate her atrophied muscles. To choose an activity within the range of her capabilities, however, was well nigh impossible, and it was obvious that she would require the aid of some kind of self-help apparatus. The remainder of this article will tell the story of how this was achieved.

First Attempts

The first and very important step in the programme was to eliminate gravity from the patient's arms by suspension in slings and springs, thus giving buoyancy and removing resistance to movement.

A Guthrie-Smith frame was made out of $\frac{3}{4}$ inch galvanized water piping, and erected over her bed (the patient was able to purchase this and have it erected for use at home). A track of roller-type curtain-rail was fitted to the frame above the patient's head, and from this her slings and springs were suspended.

To make possible a more useful position, the flail right arm was fitted with an adjustable elbow brace (Fig. 1a). The right hand was badly deviated in the ulnar position;

this was partly overcome by an extension piece fitted to the brace (Fig. 1b).

The patient's normal lying position in bed was flat on her back, with two pillows. The bed was not adjustable and she had no back rest; so all activities had to be adapted to the patient's position.

Writing was the first activity to be considered and suitable apparatus was designed to meet requirements.

Penholder. As the ulnar deviation prevented the patient from viewing the point of a pencil and, in the absence of controlled grip, prevented her from holding a pencil, a gadget was made that would hold the pencil at a suitably directed angle for her. A compass arm attached to two rings, through which her thumb and index finger were placed, was a satisfactory solution.

Writing Table. This had a perpendicular writing position, and was placed in front of the patient while she maintained her recumbent position in bed. Notepaper was secured by two bands of elastic and held at the top by a bull-nose clip, which in its turn was tied to a length of nylon fishing gut. On the distal end of the gut a chain made up of small key rings was fastened, and this, passing along a pulley system, adjusted the page to its desired height as the patient engaged her pencil point in any one of the rings (Fig. 2).

A new difficulty was encountered at this stage. The patient was unable to move her hand across the paper in the horizontal plane; from a given spot in mid-position she was able to move $\frac{1}{2}$ inch to the right, 2 inches to her left, $\frac{1}{2}$ inch upwards and 1 inch downwards. It became obvious that if any degree of success was to be achieved, the patient's right hand would have to be linked to some driving force, some mechanical device perchance; but this might be clumsy and costly. The occupational therapist foresaw the possibilities of 'harnessing' the power of the patient's left shoulder muscles for this, and it was made possible simply by linking one hand to the other with a connecting rod made from a long aluminium knitting needle (Fig. 1c). The reciprocal movements of trapezius and pectoralis groups provided the necessary drive required to move the arms 4 inches across her notepaper. Great precision had to be observed in the placement of all apparatus in relation to the patient.

It was on this perpendicular surface (Fig. 2) that the patient re-learned her writing skill; she had great powers of perseverance, and within a very short time was writing with clear legibility and with quite a style—her output amounted to 100 letters per month at one stage. Thus, with this added interest, she widened her horizons and strengthened her muscle groups.

Muscle Re-education

Three years passed before she returned to Groote Schuur Hospital for further reassessment. The muscle tests and other investigations recorded definite improvement, and the orthopaedic surgeon suggested stepping up her occupational therapy activities. A very definite limiting factor was her position in bed but, through the timely cooperation of the Cape Cripple Care Association, an adjustable surgical bed was provided, plus other aids to more prolonged comfortable sitting. Another hindrance to sitting with more than 40° hip flexion was the tendency to nipping of the anterior capsule of her hip joint, which caused a good deal of pain.

Self-feeding, drinking, embroidery, and painting were

amongst the activities which the occupational therapist introduced in the muscle re-education programme. The methods used were as follows:

Drinking—A non-spill drinking beaker was suspended in a swivel stand, which when placed on the patient's chest could be tilted easily as she initiated the movement with her chin (Fig. 3).

Feeding—This was more complicated, and could not be carried out with her hands harnessed together. The left shoulder had to take the initiative. A plate of nursery type, which provided bunker sides, was placed on an elevated stand resting on her sternum and bringing the plate up to mouth level. The spoon had to be flat, and one end and one side of the spoon was provided with a bunker. The handle was long and flexible and a square end fitted into a socket on the back of the working splint of the left hand. Food was taken onto the spoon with a contraction of the left pectoral, and brought to the mouth with a contraction of the upper fibres of the trapezius (Fig. 4).

Embroidery—To give variety, embroidery was considered. A special tension frame to hold the material taught was a necessity. A very large needle had to be used and passive extension of the thumb was required in order that the patient could get hold of the needle. A light spring was attached to the thumb so that the thumb could be adducted against the spring. The needle was thrust into the canvas and out again all in one movement (Fig. 5).

Writing. As the patient's ability to sit, and her sitting position improved, a change was made in her writing apparatus. The perpendicular writing table was replaced by one standing in the normal bed-table position. The compass gadget for holding her pencil was replaced by a more suitably developed penholder. Using an old tracheotomy tube as the base for the holder, a ball-point refill was pushed through the tube, the curve of which was just that required to meet the need. It was then padded up on the outside to fill the patient's grip. This has become an indispensable part of her equipment. To give an easy flowing rhythmical movement for writing, a glider splint was made for her left hand (Fig. 6), using the anchoring rod to attach it as before to the right hand. This not only added stability but prevented a great deal of fatigue to the patient (Fig. 7). She now conducts much of her business by letter, and writes at a speed of 25 words per minute. In doing this she is independent, except for changing to a new page, and placing the letter within an envelope.

Painting. During a reassessment period in hospital, in November 1956, the occupational therapist suggested to the patient that she might be taught to draw and paint. To this the patient replied, 'I have never painted in my life, and I don't know the first thing about drawing', but with her usual willingness a start was made. A paint brush replaced the pen in the tracheotomy tube, a revolving drawing board was made to increase her working area from 4 inches square to 10 inches square, and last of all a revolving paint box to give easy access to any particular colour (Fig. 8). So began an activity which completely absorbs the patient's interest, for she has discovered a latent talent (Fig. 9). She has learnt much of technique, and the vagaries of water-colour sketching and rendering, but, most important of all she has now got a flicker of movement back in her left triceps. This is attributed directly to the constant use of a knife for scraping out the highlights in her pictures. There

has been a notable toning up of other muscle groups and her work tolerance has increased by many hours.

The subject matter for painting is limited to what can be brought to the patient. She has been particularly successful in painting South African flowers. She has been encouraged to compete in local art competitions, and within 18 months of starting this activity has won a first and second prize. Some of her pictures have been exhibited only recently at the second World Congress of Occupational Therapists in Copenhagen, where a film of her case, 'Hands in Harness', was also shown.

Without the close cooperation of other members of the rehabilitation team the success achieved in the rehabilitation

of this woman would not have been possible. The patient herself was the greatest inspiration, for she would always say of a new gadget, 'It must work, it's got to work'.

This case forcibly illustrates the importance of periodic reassessment in rehabilitation programmes. For the future, periodic reassessment of the chronically disabled must be insisted on.

In conclusion, how appropriate are the words of Florence Jones Terry: 'As long as medicine is able to prevent so many people from dying, it is up to all those connected with health activities to work out some way by which the rehabilitated individual may lead a useful and satisfactory life.'

EXTRA-UTERINE PREGNANCY: A CASE REPORT

MERWYN GOLDBLATT, M.B., CH.B. (CAPE TOWN), Upington

Full-term extra-uterine pregnancy is a rare occurrence; the successful delivery of a live foetus is rarer still, various published series putting the foetal death-rate between 50% and 70%. A case of full-term extra-uterine pregnancy, successfully terminated by laparotomy with delivery of a live foetus, is presented.

The patient M.D., a Coloured female aged 40 years, was admitted to the Gordonia Hospital on 6 August 1958. She was complaining of severe abdominal pain around the umbilical region since the previous evening, and said that the pain was continuous in character and quite unlike labour pains. There had been no pain in the back and no radiation away from the umbilical region. The pain was very severe and had precluded any sleep the previous night. She had not noticed a bloody show or any other discharge.

She said her last menstrual period was during October 1957, but was not sure of the exact date. She thought she was now at term. Until the onset of the abdominal pain she had experienced a perfectly normal pregnancy, during which she had noticed no undue symptoms. I had seen her only once antenatally, 2 months before admission, but no notes had been kept and I can only recall that nothing abnormal was noted at the time.

Past Obstetrical History. There had been 2 previous live births and no abortions, stillbirths or neonatal deaths. The youngest of the patient's 2 children was 6 years old. Both previous confinements had been perfectly normal. There was nothing of note in her past history and her menstrual history was quite normal. She had never suffered from pelvic infection.

Clinical Examination

The patient was a thin Coloured woman, obviously in severe pain. Clinically she did not appear to be shocked. Pulse 80 beats per minute, full and regular. Blood pressure 120/80 mm. Hg. There was no sweating, coldness of the extremities or pallor of the mucous membranes. Temperature 97.6°F. Nothing abnormal found in the cardiovascular and respiratory systems.

On abdominal palpation marked tenderness and guarding of the anterior abdominal wall were observed. The tenderness was at its greatest around the umbilicus and in the mid-line down to the symphysis pubi. Despite the marked degree of guarding, the foetal parts were very prominent. These gave the impression of lying just below the abdominal wall with no uterine wall intervening. Though the vertex of the foetus was presenting, the head was riding high over the pelvis and was quite mobile. Foetal movements were very markedly visible despite the guarding of the abdominal wall. The foetal heart was clearly audible.

On pelvic examination the cervix was felt to be soft but tightly closed, not even admitting the tip of a finger, even though at this stage the patient had been having abdominal pains for 12 hours. A hard mass, the shape of a uterus, was felt through the left fornix. On movement of the cervix this mass was felt to

move too. On bimanual examination the foetus was felt to be lying outside the uterus. When the hand was withdrawn a slight blood-stained discharge was seen on the gloved finger.

Diagnosis

The differential diagnosis was considered between an extra-uterine pregnancy and a slow rupture of the uterus. A diagnosis of extra-uterine pregnancy was made for the following reasons:

1. The presence of the mass resembling a uterus felt through the left fornix.
2. The absence of any signs of shock indicating uterine rupture.
3. The absence of any previous Caesarean section or other operation on the uterus, or of any evidence of pelvic contracture with severe labour pains which could have caused uterine rupture.
4. The presence of a clearly audible foetal heart.

Treatment

The patient was prepared for abdominal operation. Premedication was given consisting of 1/50 gr. of atropine. Anaesthesia was introduced with ethyl chloride and continued with ether via an open mask. It was remarkable how the foetal parts now bulged out the relaxed abdominal wall of the mother.

A mid-line, sub-umbilical incision was made, and on opening the peritoneum, the green-stained amniotic sac was clearly seen, filling the abdominal cavity. The foetus was moving freely within the sac. The sac was then opened and a live male infant rapidly and easily delivered. No resuscitation was required.

The placenta and membranes were attached to bowel, omentum and peritoneum and covered the anterior and lateral abdominal walls, bladder and right adnexae. The pregnancy had ruptured through and arisen from the right adnexa. The placenta and membranes were removed practically *in toto* and with fair ease, once a plane of cleavage was found. A right salpingectomy was performed. The uterus was found situated in the left of the pelvis where it had been felt through the left fornix on pelvic examination.

A tube drain was inserted into the right pouch of Douglas through a separate stab incision. The abdomen was closed in layers after haemostasis had been secured. The tube drain was removed on the 5th post-operative day.

The post-operative course was quite uneventful, the patient being discharged 10 days after the operation.

The infant weighed 7 lb. 8 oz. at birth and was perfectly formed, with no congenital abnormalities. Breast feeding was normally commenced and maintained.

SUMMARY

A case of full-term extra-uterine pregnancy is presented, the clinical findings suggesting the diagnosis are discussed, and the treatment and operative findings are presented.

Suid

Gedure
van sa
kan vo
na die
van di
wat vr
aangene
die ka
nie ho
gegee
cava.
gebruik
stof be
uur en
vloeistof
0.2 kg
wees d
wat di
sterke
om die
brakin
die toe

Kals
dat di
toedien
van ka
liese s
ureum
Besker
soort i
gestel
maar c

Crush
the re
Shortl
malad
fluid i
free fr
40-50
calorie
fluid i
the su
to be
should
a use
every t
be pa

2 Me

Suid-Afrikaanse Tydskrif vir Geneeskunde : South African Medical Journal

VAN DIE REDAKSIE : EDITORIAL

DIE BEHANDELING VAN AKUTE NIERSAKING

Gedurende die Tweede Wêreldoorlog het beserings as gevolg van samepersing geleei tot die besef dat akute nierversaking kan voorkom op die basis van 'n omkeerbare letsel. Kort na die oorlog het die volgende konserwatiewe behandeling van dié toestand ontstaan: streng beheer van die inname van voedsel met 'n hoë kaloriemengsel van glukose en vet wat vry is van elektrolyte en proteïene.¹ Dit word nou aangeneem dat glukose in 40-50% sterkte genoeg is om die kalorieë te verskaf en dat voedings wat baie vet bevat nie hoof gegee te word nie. Hierdie vloeistof kan per mond gegee word of binneearls in die superior of inferior vena cava. Kleiner are tooon die neiging tot trombose by die gebruik van hipertoniese oplossings. Die inname van vloeistof behoort beperk te word tot omrent 400 ml. per 24 uur en die daaglikse gewig is 'n goeie aanduiding van die vloeistof-behoeftes. Die ideal is dat die pasiënt ongeveer 0·2 kg. in gewig elke 24 uur moet verloor. Dit mag nodig wees om die verlies van vloeistof deur brakking te vervang, wat dit ook mag nodig maak om soutoplossings in half-sterkte per mond te gee—egter nie meer as wat nodig is om die verlies deur brakking te vervang nie. Hierdie lastige brakking kan dikwels deur chlorpromazien verhoed word as die toestand van die lever bevredigend is.

Kalsiumglukonata behoort gegee te word om te verhoed dat die serum-kalsium daal. Natrium-wisselharse en die toediening van glukose en insulien kan help om die styging van kalium in die serum teen te gaan. Die gebruik van anaboliese steroïde is onlangs bepleit en hierdeur kon die bloed-ureum aansienlik verminder word by sommige pasiënte.^{2,3} Beskermende verpleging kan help om hierdie pasiënte teen die soort infeksies te vrywaar waaraan hulle besonderlik blootgestel is. Antibiotiese middels kan gegee word indien nodig, maar die dosisse moet versigtig bepaal word omrede van die

stadige uitskeiding van hierdie stowwe by die oliguriese pasiënt. Hierdie pasiënte kry dikwels 'n anemie, maar oortapping moet vermy word indien moontlik.

Baie pasiënte kan gehelp word gedurende die oliguriese fase met hierdie konserwatiewe regime. Sommige pasiënte gaan egter progressief agteruit ten spye van al hierdie maatreëls. Dit is in hierdie gevalle dat die kunsnier gebruik moet word. Soos Merrill⁴ aangetoon het, is dit nie die *soort* dialiese wat van die grootste belang is nie, maar die *ondervinding* van die terapeutiese span, en ons is bly om te kan meld dat daar bedreve spanne in hierdie land is.* Pasiënte wat tekens toon van kliniese of biochemiese agteruitgang onder die konserwatiewe regime gedurende die oliguriese fase, behoort sonder verwyl na 'n erkende sentrum verwys te word.

As die volume van die urine eers 1 liter per 24 uur bereik het, kan hierdie strawwe regime verslap word. 'n Groot deel van die poliuri van die diuretiese fase bestaan slegs uit lediging van oortollige ekstrasellulêre vloeistof en pogings tot vervanging hiervan mag lei tot oorhidrasie en 'n verlengde tydperk van diurese. Die pasiënt se algemene toestand, toestand van hidrasie, dors, en die vlak van die serum-elektrolyte behoort die maatstaf te wees liewers as die hoeveelheid en bestanddele van die urine. Gedurende die diuretiese fase behoort die pasiënt vrye toegang tot water te hê en 'n dieet wat ryk is aan kalium en sout.

* Kyk na die artikel oor die kunsnier wat op bladsy 374 van hierdie uitgawe van die *Tydskrif* verskyn.

1. Bull, G. M., Joekes, A. M. en Lowe, K. G. (1949): Lancet, 2, 229.
2. McCracken, B. H. en Parsons, F. M. (1959): *Ibid.*, 2, 885.
3. Gjorup, S. en Thaysen, J. H. (1958): *Ibid.*, 2, 886.
4. Merrill, J. P. (1955): *Treatment of Renal Failure*. New York: Grune & Stratton, Inc.

THE TREATMENT OF ACUTE RENAL FAILURE

Crush injuries during the Second World War resulted in the recognition of acute renal failure as a reversible lesion. Shortly after the war the conservative treatment of this malady was developed on the basis of strict control of fluid intake with a high-calorie mixture of glucose and fat, free from electrolytes and protein.¹ It is now thought that 40-50% glucose is all that should be given in the way of calories and that diets rich in fat need not be used. This fluid may be given either by mouth or intravenously into the superior or inferior vena cava; smaller veins are apt to be thrombosed by the hypertonic solutions. Fluid intake should be restricted to about 400 ml. per 24 hours, and a useful guide to fluid requirements is the daily weight. Ideally the patient should lose about 0·2 kg. in weight every 24 hours. Fluid loss through vomiting may have to be replaced, and this may also necessitate giving the patient some half-strength saline by mouth, but not more

than would replace that lost by vomiting. Chlorpromazine is often able to prevent this troublesome vomiting if the condition of the liver is satisfactory.

Calcium gluconate should be given to counteract the tendency of the serum calcium to fall. Sodium exchange resins and the administration of glucose and insulin may help to lower a mounting serum potassium. Recently the use of anabolic steroids has been advocated and these have been shown to lower the blood urea considerably in some patients.^{2,3} Barrier nursing helps to prevent the infections to which these patients are particularly liable. Antibiotics are given as needed, care being taken regarding dosage because of the slow excretion of these substances by the oliguric patient. These patients often become anaemic but transfusion should be avoided if possible.

While many can be saved during the oliguric phase by this conservative regime, there are some patients who

deteriorate steadily despite all these measures. It is in these cases that an artificial kidney should be used. As Merrill⁴ has pointed out, it is not so much the *type* of dialysis used but the *experience* of the team that is important, and we are pleased to note the presence of experienced teams in this country.* Patients deteriorating clinically or biochemically on the conservative regime during the oliguric phase should be referred to a recognized centre without delay.

Once the urine volume has reached 1 litre per 24 hours this rigid regime can be relaxed. Much of the polyuria of

* See article 'Die Kunsnier (The Artificial Kidney)' published on this page of this issue of the *Journal*.

the diuretic phase is only evacuation of excess extracellular fluid, and efforts to replace it may lead to overhydration and prolong the period of diuresis. One should be guided by the patient's general condition, state of hydration, thirst, and the serum-electrolyte levels rather than by the urine volume and its contents. During the diuretic phase the patient should have easy access to water and a diet rich in potassium and salt.

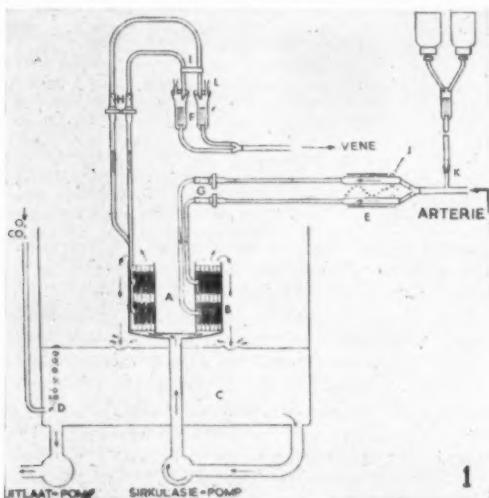
1. Bull, G. M., Joeckes, A. M. and Lowe, K. G. (1949): Lancet 2, 229.
 2. McCracken, B. H. and Parsons, F. M. (1958): *Ibid.*, 2, 885.
 3. Gjorup, S. and Thaysen, J. H. (1958): *Ibid.*, 2, 886.
 4. Merrill, J. P. (1955): *Treatment of Renal Failure*. New York: Grune & Stratton, Inc.

DIE KUNSNIER (THE ARTIFICIAL KIDNEY) GEBRUIKE EN KOMPLIKASIES

A. J. BRINK, M.D. (PRETORIA), M.R.C.P. (LOND.), P. W. BOTHA, M.B., CH.B., M.R.C.P. (EDIN.),
T. C. H. ARNDT, M.B., CH.B. en J. N. DE KLERK, M.B., CH.B., F.R.C.S. (EDIN.).

Departement Interne Geneeskunde en Departement Urologie, Degenerasie Siektestoestaande Groep, W.N.N.R., Universiteit Stellenbosch, Karl Bremer-Hospitaal, Bellville

Die gebruik van 'n kunsnier is reeds 'n beproefde metode van behandeling vir nierversaking.^{7, 8} Ekstrakorporeale dialise is tot heel onlangs weinig gebruik omrede die praktiese probleme daaraan verbonde. Baanbrekerswerk, veral deur Kolff, het egter aanleiding gegee tot die ontwikkeling van 'n kunsnier deur 'Travenol Laboratories', wat teen 'n redelike koste beskikbaar is, en wat grootliks voldoen aan die vereistes vir 'n ideale kunsnier.⁸ Die Travenol-kunsnier word tans in 'n paar inrigtings in Suid-Afrika gebruik. Ons het gemeen dat dit nuttig sou wees om nou aan te dui wat die waarde



Afb. 1. Die apparaat.

van hierdie apparaat is deur 'n uiteensetting van ons ervaring met sommige pasiënte wat dialise ondergaan het.

DIE TOESTEL

Die toestel bestaan hoofsaaklik uit 3 gedeeltes (Afb. 1): (1) 'n Verbruikbare, vervangbare dialisator, (2) 'n bad wat

TABEL I. SAMESTELLING VAN DIE DIALISERINGSVOG

Invert Suiker (Travert) 0·4 %.
Melksuur om pH na 7·4 te bring.

dialiseringsvog word saamgestel volgens die aanbevelings van Koff® (Tabel I).

3. *Die pompmeganismus* verseker dat bloed teen die nodige druk en met die verlangde vloeい deur die dialisator gepomp word. Die vloeい is vanaf (i) die radiale arterie, of (ii) die vena femoralis of vena magna, na 'n vena van die voorarm; dit word deur die dubbele cellulosebus gevoer na die dialiseringssbad en dan daar uit deur 2 filters terug na die vena.

Waar die pasiënt se toestand dit toelaat, word hy ingelig oor die prosedure en so gemaklik moontlik gemaak. Sedasie

is gewoonlik nodig voor en gedurende die procedure. Die been en arm waar die insnydings plaasvind, word met gewone antisепtiese maatreëls voorberei. Kanalising van die vate geskied deur middel van polieteenbuise en die pasiënt word voor dialise gehepariniseer met 'n dosering van ongeveer 1 mg. per kg. gewig. Elke bottel bloed word verder ook gehepariniseer met 20-25 mg. heparien. Verdér word daar ongeveer 10 mg. heparien per uur aan die pasiënt toegedien en daar word gepoog om die stollingstyd te handhaaf tussen 15-30 minute. Die druk in die dialiseringstelsel word beheer en word bevredigend gehandhaaf deur dit te belaai met 1,000-1,500 c.c. bloed. Dit is waarskynlik verkeerslik, en van veel waarde,⁹ om die druk aan die uitvloeikant te beheer deur 'n manometer en dit te handhaaf teen ongeveer 70 mm. kwik. Tot dusver het ons nie hierdie gebruik ingestel nie.

'n Span werkers met ondervinding en goede samewerking is essensieel vir die bevredigende gebruik van die kunsnier. Daar behoort minstens 2 geneesherre betrokke te wees met die hulp van 'n verpleegster en 'n tegniese assistent. Die fasilitate van 'n biochemiese laboratorium is noodsaaklik.

ONDERVINDING

Die kliniese besonderhede van 'n aantal pasiënte wat óf met die kunsnier behandel is, óf in aanmerking gekom het daarvoor, word nou kortliks uiteengesit om te dien as illustrasie van wat bereik kan word en wat die moontlike aanduidings vir die gebruik van hierdie vorm van dialise is. Sekere gevare en komplikasies wat mag voorkom, word ook vermeld.

Geval 1.

In Kleurlingman, 36 jaar oud, is toegelaat op 6 Mei 1958. Daar is 'n geskiedenis van akute nefritis in 1947. Symptome wat nou sterk oor 'n tydperk van 2 maande, bestaande uit abdominale pyne—veral suprapubes pyne en pyne in albei nierhoede, 'n wit uretrale afskeiding, en ook poliuri en frekwensie. Daar was ook hoofpyn en duiseligheid en verminderung van visie. Oor 'n tydperk van 6 weke voor opname was hy bedleend met anoreksie, abdominale pyn en brakking. Die belangrikste fisiiese be vindings was 'n akute siek pasiënt met dispnee wat baie anemies voorkom het. Hy was duidelik in hartversaking met 'n vergrote hart, hoofsaklik as gevolg van linker-ventrikuläre hypertrofie. Bloeddruk 240/140 mm. Hg. Daar was 'ngraad III retinopatie met veulvuldige bloedings en eksudate.

Bloed: Hemoglobien 6 g.%, witselle 15,300 per c.m.m. en bloedsinkting 66 mm./eerste uur.

Urine: Albumien +++, mikroskopies baie etterselle en enkele silinders/H.V.V. en geen organismes op kwekning nie.

Proteïene: Globulien 2·4 g.% in albumien 3·9 g.m.%.

Bloedureum: 251 mg.%.

Serumelektrolyte: Kalium 7 m. ekw./liter, natrium 130 m.ekw./liter, en chlорide 85 m. ekw./liter.

Die elektrokardiogram toon 'n beeld van linker ventrikuläre ischemie, asook tekens van hiperkalemie met hoë spits T-golwe.

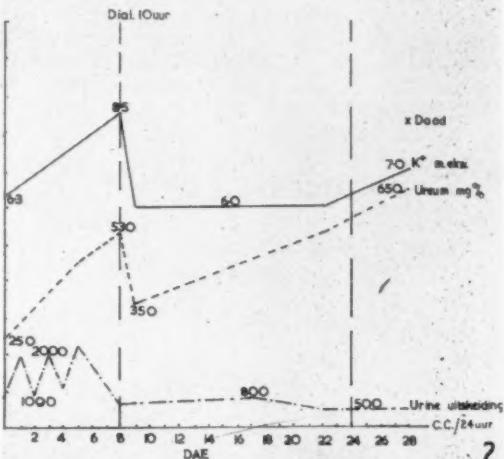
Röntgenfotos borskas: Hiervolgens was die hartskaduwees nie vergroot nie, en was daar nie duidelike tekens van stuwing in die longe nie.

Kliniese diagnose: Chroniese nefritis met uremie en moontlike piëlonemefritis.

Die pasiënt is oor 'n tydperk van 10 dae op konserwatiewe grondslag behandel, met noukeurige waarneming van sy vogbalans, 'n hoë kalorieë-inname met 'n protein-vry diëet, en antibiotiese middels in die vorm van Terramisin. Die hartversaking is behandel met digitalis. Die pasiënt het egter geleidelik agteruitgegaan. Sy urine-uitskeiding het verminder, sy bloedureum gestyg en die serumkaliumwaarde het hoër geword. Op 14 Mei 1958 het hy ook 'n perikardiale wrywing ontwikkel. Elektrokardiografiese opvolging het 'n toenameende hiperkalemiese beeld aangedui. Op 16 Mei 1958 was die bloedureum 510 mg.%, kalium 9·5 m. ekw./liter, CO₂-verbinding 18 volumes % en die pasiënt

was baie lomerig en het verward voorgekom. Dit is besluit om hom met die kunsnier te behandel.

Die belangrikste biochemiese be vindings voor en na dialise word in Afb. 2 grafies voorgestel. Die elektrokardiografiese veranderinge voor, tydens, en na dialise word in Afb. 3 uiteengesit.



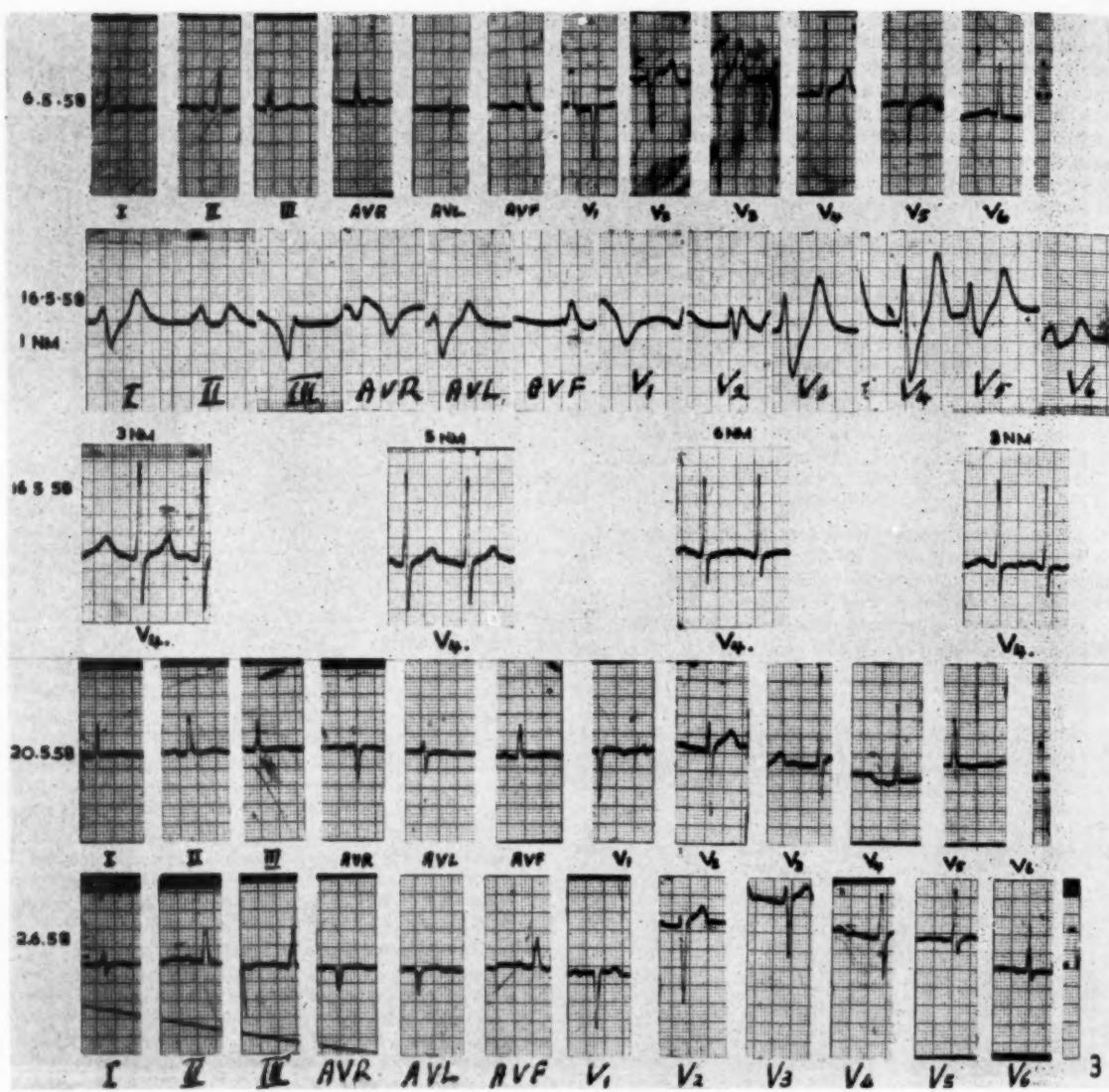
Afb. 2. Biochemiese be vindings voor en na dialise—chroniese nefritis met niersake (Geval 1).

Kommentaar

Na 10 uur dialiseringstyd het hierdie pasiënt klinies baie verbeter. Die mate van verbetering het in die daaropvolgende dae toegeneem. Die bloeddruk van die pasiënt, wat gedurende sy hospitaalverblyf gedaal het tot 160/100 mm. Hg., het na dialise gestyg tot 210/140 mm. Hg. Sy urine-uitskeiding het merkbaar gedaal na die dialise en het daarna constant laag gebly—tussen 800 en 500 c.c. per 24 uur. Die elektrokardiografiese beeld van ernstige hiperkalemiese toksemie op 16 Mei 1958, voor dialise, het binne 'n tydperk van 2 uur verander na 'n feitlike normale beeld. Hierdie normale elektrokardiografiese beeld het so voortgeduur tot voor die pasiënt se dood op 2 Junie 1958. Die pasiënt se toestand het op die volgende paar weke geleidelik vererger, sy bloedureum het gestyg asook die bloedkalium, en die perikardiale wrywing het nooit verdwyn nie. Die pasiënt het later in 'n uremiese koma verval en is op 2 Junie 1958 oorlede. Die post-mortem ondersoek het die onderliggende patologie bevestig as 'n chroniese nefritis. Daar was ook die post-mortem be vindings van hartversaking met linker ventrikuläre hypertrofie en 'n fibrinouse perikarditis.

Die ervaring met hierdie pasiënt het geleer dat die kunsnier doeltreffend gebruik kon word om 'n uremiese pasiënt simptomatis spoedig te verbeter. Die verbetering het voortgegaan oor 'n kort tydperk na dialise. 'n Gevaarlike hiperkalemiese toestand kon binne enkele ure herstel word. Na die dialisetydperk mag die bloeddruk styg en daar is ook 'n post-dialise oligurie teenwoordig. Dit is interessant dat die hiperkalemiese beeld op die elektrokardiogram selfs na 'n tydperk van 16 dae nie weer teruggekeer het nie. Die gebruik van die kunsnier by 'n geval van chroniese nefritis is slegs van tydelike nut.

By 2 verdere pasiënte met chroniese nefritis en uremie wat ook gedialiseer is—1 pasiënt is selfs tweeker gedialiseer—



Afb. 3. Elektrokardiografiese veranderinge voor, tydens en na dialise (Geval 1).

was die ondervinding min of meer dieselfde. By een van hierdie pasiënte is daar egter by outopside gevind dat 2 stukke van die polieteenbuis, wat in die arc ingeplaas is, afbrek het en in die longe beland het. Daar was ook septiese embolieë in die longe gewees. Hierdie pasiënt het die polieteenbuis egter oor 'n tydperk van ongeveer 'n week in sy vena gehad. Die gevaar van embolieë van die buis, wat veral kan afbrek wanneer daar perforasies in die kante ingesit word om die vloeie te vergroot, moet deeglik in gedagte gehou en voorkom word. Veneuse trombose met infeksie en septiese embolieë is ook 'n ernstige komplikasie.

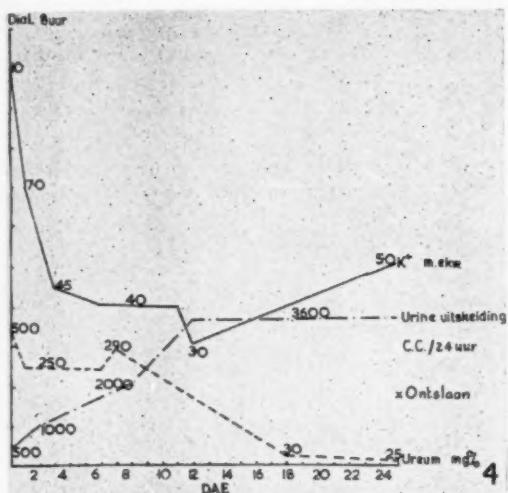
Geval 2

Die pasiënt is 'n 36-jarige Blanke vrou. Sy het pogings aangewend om 'n abortus te bewerkstellig. Sy het oor 'n tydperk van

10 dae apiol (ortotrikresiefosfaat) per mond gebruik, en daarna 10 dae lank 'n ergot-preparaat per mond. Aborsié het toe plaasgevind. Sy is op 20 Mei 1958 tot 'n hospitaal toegelaat waar sy 'n kurettasie ondergaan het. Na 4 dae is sy uit die hospitaal ontslaan, maar sy het tuis anoreksie ontwikkel, begin braak en 'n anurie ontwikkel. Op 28 Mei 1958 is sy tot die Karl Bremer-Hospitaal toegelaat in 'n toestand van dehidrasie en asidose. Sy was in duidelike hartversaking en het 'n bloeddruk gehad van 160/100 mm. Hg. Albei niere was tastbaar. Die elektrokardiogram het 'n ernstige hiperkalemiese beeld getoon. Serumkalium was 10 m.ekw./liter. Bloedureum 500 mg.%.

Die pasiënt se toestand is as 'n noodoetoestand beskou, en daar is onmiddellik reëlings getref om die kunsnier in gebruik te stel. Sy is nog op dieselfde dag van toelating gediialiseer, eers 'n halfuur lank toe die dialisor gebreek het as gevolg van 'n opbouing van druk—waarskynlik as gevolg van stoolsels in die uitvloeiwit. Die dialise is weer herhaal en sy is daarna 6 uur lank gediialiseer

Dit
en ook
terugge
en dit
pasien
na die
Vans
sy be
neomis
en een
1958.
Piëls
liggen
opgene
toestan
Komm
Die
beeld
verkéed
die pa
Die
teeno
post-d
wat n
antibi
Geval
'n N
Karl B
wustel
soek '
en ha
en daa
in albu
Swan
van el
Depart
doedig
'n anu
uitske



Afb. 4. Veranderinge in die biochemiese afwykings—toksiese nierversaking (Geval 2).

Die veranderinge in die biochemiese afwykings word in Afb. 4 uitgegesit.

Dit is duidelik dat die kalium weereens spoedig gedaal het, en ook die elektrokardiogram het na 'n volkome normale beeld teruggekeer. Bloedureum is met die dialise na 250 mg.% afgebring en dit het geleidelik daarna gedaal tot normale waardes. Die pasiënt se urine-uitskeiding het geleidelik gestyg en sy is 24 dae na die dialise in 'n normale toestand ontslaan.

Vanaf 17 Junie 1958 was daar egter 'n swaaiende koors en het sy 'n veretterende proses gehad in die insnydungswoond in haar been. 'n Organisme, bacillus proteus wat net gevoelig was vir neomisien en kantrex, is hiervan gekweek. Ten spye van behandeling met hierdie antibiotiese middels was daar geen respons nie, en eers nadat alle antibiotiese middels gestaak is op 28 Junie 1958, het die koors gedaal.

Pielografie is hieraan uitgevoer en die pasiënt het geen onderliggende nierafwykings getoonto nie. Sy is weer op 22 Julie 1958 opgeneem in die hospitaal met 'n veneuse trombose in die linkerbeen. Sy het ook hiervan herstel en is op 31 Julie 1958 in 'n gesonde toestand ontslaan.

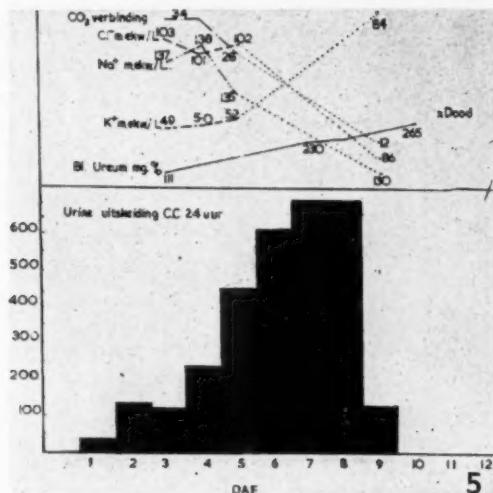
Kommentaar

Die pasiënt se kaliumwaardes en haar elektrokardiografiese beeld was sodanig dat sy in 'n lewensgevaarlike toestand verkéer het. Die gebruik van die kunsnier het sonder twyfel die pasiënt se lewe gered.

Die belangrikheid van deeglike voorkomende maatreëls teenoor infeksie word hier beklemtoon. Die ernstigste post-dialise komplikasie was 'n infeksie met bacillus proteus wat nie onder beheer gebring kon word met die gewone antibiotiese middels nie.

Geval 3

'n Nie-Blanke vrou, 37 jaar oud, is as 'n noodtoeling tot die Karl Bremer-Hospitaal toegelaat op 31 Mei 1958. Sy was bewusteloos en het konvulsies gehad. Daar was by verdere ondersoek 'n temperatuur van 99°F, 'n bloeddruk van 160/95 mm. Hg, en haar pols was 100 per minuut. Die pasiënt het geelsug gehad en daar was definitiewe edeem teenwoordig. Daar was krepitasies in albei longbasisse. Die lewer was 3 vingers vergroot, en teer. Swangerskap (ongeveer 38 weke) was teenwoordig. Die diagnose van ekklampsie is gemaak. Die pasiënt is onder toesig van die Departement Verloskunde behandel, en op 1 Junie 1958 het sy 'n doodgebore doogtertje gehad. Vanaf dieselfde dag het die pasiënt 'n anurie ontwikkel. Die biochemiese veranderinge in die urine-uitskeiding van die pasiënt in die daaropvolgende dae word in



Afb. 5. Biochemiese veranderinge in die urine-uitskeiding—eklampsie en levernekrose—(Geval 3).

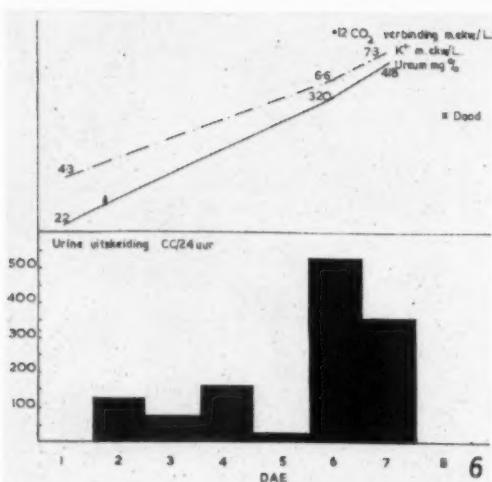
Afb. 5 uiteengesit. Die pasiënt se ikterus het voortgeduur en haar bloedbilirubine het tussen 7 en 8 mg.% gebly. Die pasiënt se kliniese toestand het onveranderd gebly tot 6 Junie 1958. Vanaf 7 Junie 1958 het dit geskyn of sy verbeter. Haar urine-uitskeiding het matig verhoog. Vanaf 7 Junie 1958 het sy egter begin braak, maar dit het die volgende dag weer verminder. Haar lewer het kleiner gevoel en was nie langer drukteer nie. Sy was ook geestelik meer helder. Sy is deurgaans op konservative grondslag behandel met so 'n akkuraat moontlike vogbalans, hoë kalorieë-inname en die beperking van proteinene. Die elektrokardiografiese beeld het egter duidelik toenemende hiperkalemie aangedui. Op 9 Junie 1958 het die pasiënt se toestand egter verswak. Die urine-uitskeiding het plotseling verminder en sy is in die vroeë oggend van 10 Junie 1958 oorlede.

Kommentaar

Die pasiënt was nog onder kliniese toesig en die kunsnier is agterweé gehou omrede die skynbare kliniese verbetering. Dit is egter belangrik dat daar 'n steeds toenemende elektrokardiografiese beeld van hiperkalemie voorgekom het. Ten spye van die matige verhoogde urine-uitskeiding het die simptoom van braking ook voorgekom vanaf die 7e dag na die ontstaan van die anurie. Progressiewe veranderinge in die elektrokardiogram, asook die voorkoms van braking moes hier waarskynlik vir ons vroeër laat besluit het om die kunsnier in gebruik te stel.

Geval 4

'n 61-jarige Blanke vrou. Die pasiënt, het op 10 Mei 1958 'n Wertheim-operasie ondergaan vir 'n karsinoom van die cervix uteri. Behalwe vir 'n bloeddruk van 160/100 mm. Hg was daar geen ander kliniese bevindings van betekenis voor die operasie nie. Die operasie is onmiddellik gevolg deur 'n anurie. Die urine-uitskeiding en veranderinge in bloedureum en bloedkalium word in Afb. 6 uiteengesit. Die pasiënt se kliniese toestand het vereers onder konservative behandeling bevestigd geblyk. Vanaf 15 Julie 1958 het sy egter 'n bleek en moe voorkoms gehad en matig gedehidreerd voorgekom. Daar was krepitasies van albei longbasisse, die pols was 90 per minuut en die bloeddruk 170/100 mm. Hg. Daar was 'n geringe uitsetting van die buik en dermklanke was teenwoordig. Vars bloeding is in die regter-retina opgemerk. Op 16 Julie 1958 het die pasiënt kliniese eintlik beter voorgekom, haar bloeddruk was 140/90 mm. Hg en die urine-uitskeiding het vermeerder tot 540 c.c. per 24 uur. Die elektrokardiogram het nog geen ernstige hiperkalemiese beeld getoon nie. Die serumkaliumwaarde was egter 6.6 m.



Afb. 6. Urine-uitskeiding en veranderinge in bloedureum en bloedkalium—anurie—(Geval 4).

ekw./liter en die ureum 320 mg.%, en daar is besluit om die kunsnier in gereedheid te bring en om die volgende oggend te dialiseer. Die oggend van 17 Julie 1958 het die elektrokardiogram 'n baie ernstige hiperkalemiese verandering getoon. Die serumkaliumwaarde was 7.3 m. ekw./liter en die ureum 418 mg.%. Onderwyl die aansluitings gedoen is om die kunsnier in werking te stel, is die pasiënt skielik oorlede—6 dae na die aanvang van haar anurie.

Kommentaar

Ten spye van sorgvuldige waarneming het hierdie pasiënt, binne 6 dae na die aanvang van haar anurie, skielik 'n verandering ondergaan en is sy dood nog voordat die kunsnier in gebruik gestel kon word. Dit is duidelik dat by hierdie pasiënte met akute nierversaking die beeld binne 'n paar uur kan verander, en dat die toestand noodlottig kan wees binne 'n tydperk van 5-6 dae na die begin van die anurie.

Geval 5

'n 30-jarige Kleurlingman is op 28 Junie 1958 in 'n semistuporeuse toestand toegelaat. Dit het gelyk of hy ongeveer 4 weke voor opname 'n wit uretrale afskeiding ontwikkel het met disurie en frekwensie. Hy is deur 'n geneesheer behandel met pille en insputinsies. Twaalf dae voor opname het hy begin kla oor 'n seer keel, hy het 'n hoë koors gehad en suprapubiese pyn. Dié simptome het voortgeduur en 6 dae voor opname het hy 'n anoreksie en braking gehad. Die braking was voortdurend en was swart van kleur. Vanaf dié tyd het hy ook geen urine gespoor nie. Hy het ook ulsera in sy mond en op sy lippe ontwikkel en het 'n jeukende veluitslag gehad. By ondersoek was die pasiënt gedehidreerd, asidoties, en daar was afskilfering van die vel oor die voorhoof en wang. Ulserative letsets het in die mond en neushoek voorgekom met 'n bloederige afskeiding. Daar was bilaterale konjunktivale bloedings en 'n duidelike purpura oor die bors en albei arms. Die pasiënt se pols was 100 per minuut, reëlmagig en sy bloeddruk was 140/65 mm. Hg. Sy buik was baie uitgeset en timpanities. Die eksterne uretrale meatus was rooi. Behalwe die semistupor was daar nie ander afwykings van die sentrale seneweestel nie.

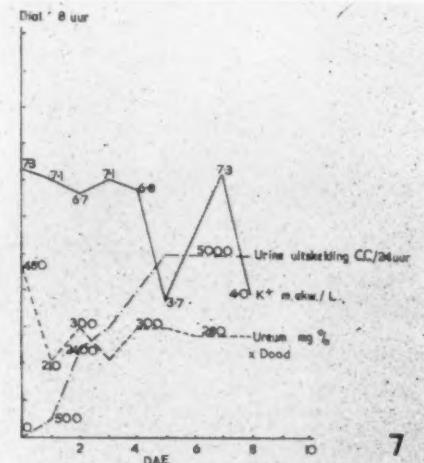
Urine: 'n Paar c.c. bloederige urine is deur middel van katesis gevind.

Blood: Hemoglobien 14 g., witselle 9,300 per c. mm., bloedbesinking 58 mm./eerste uur, en differensiële telling normaal. Stollingstyd 6 minute, bloctyd 3 minute, en kapillêre fragilitets-toets normaal.

Die elektrokardiogram toon 'n atriumfladder met 'n 2 tot 1 blok; atriale spoed 280 per minuut.

Bloedchemie (30 Junie 1958): Bloedureum 450 mg.%, serumkalium 7 m. ekw., serumnatrium 130 m.ekw/liter, serumchloriedes 70 m. ekw/liter, CO_2 -verbinding 36 volumes %, en protrombinindeks 70.

Die diagnose van hemorrhagiese diatese met anurie is gemaak. Die pasiënt is tot op 1 Julie 1958 op konservatiewe basis behandeld. Sy toestand het egter verswak en dit was nou duidelik dat hy ook 'n dermilesus gehad het. Om die rede is daar tot ekstrakorporale dialise oorgegaan en die pasiënt is 8 uur lank gedialiseer (Afb. 7).



Afb. 7. Veranderinge in die biochemiese afwykings—hemorragiese diatese—(Geval 5).

Na dialise was die pasiënt se kliniese toestand onveranderd ten spye daarvan dat die bloedureum na 210 mg. % verminder het en die CO_2 -verbinding vanaf 30.5 volumes % tot 45 volumes % gestyg het. Die hoë serumkaliumwaardes het hoog gebly. Die pasiënt se hemoglobienwaarde het egter gedaal van 12 g. % na 8 g. %. Die pasiënt het die volgende dag 'n swart stoelgang gehad wat duidelik 'n melena-onlastsing was. Op die daaropvolgende dae het die pasiënt se urine-uitskeiding geleidelik toegenem en 5 dae na die dialise het hy 'n geweldige groot diurese ontwikkel en behou—5,000 c.c. per 24 uur. Die bloedureum het ook geleidelik gedaal na 280 mg. %. Met die aanvanging van die reuse diurese, het die kaliumwaarde gedaal na 3.7, maar die dag daarna weer gestyg tot 7.3 m. ekw/liter. Ten spye van die verbetering in die bloedureum en die verhoogde uitskeiding van urine, het die pasiënt se kliniese toestand onveranderd gebly, en is hy 8 dae na dialise oorlede.

Elektrokardiografiese veranderinge was voor en na dialise onveranderd met 'n atriumfladder met 'n 2 tot 1 blok. Daar was nooit 'n duidelike hiperkalemiese beeld nie ten spye van die hoë bloedkalium. Intendeel was daar negatiewe T-uitwykings met linkerventrikuläre afleidings. Die aritmie het eers op 4 Julie 1958, 4 dae na dialise, verdwyn. Vanaf 6 Julie 1958 het die pasiënt in 'n toestand van koma verval en hy het ook konvulsies gehad. Daar was eindnekstykheid.

Post-mortem ondersoek het 'n wydverspreide hemorrhagiese diatese aangegetoon met bloedings in die hart, perikardium, dermakaal, niere, lever en ook in die brein met subarachnoidse bloeding daarby.

Kommentaar

Die pasiënt het 'n hemorrhagiese diatese gehad as gevolg van 'n onbekende toksien. Hy het ook renale skade gely met anurie. Hy is na ons mening betyds met die kunsnier behandel en die anuriese beeld het bevredigend verbeter, behalwe dat in dié geval die kalium nie gedaal het nie. Die pasiënt is egter 8 dae later dood aan die hemorrhagiese toestand wat onveranderd voortgeduur het. Na deeglike oorweging is

die bla kontra-

Die grafiese waarde teenwo 'n histie

By h om die die nie van di siektele

Geval v 'n Bl Daar v in geaa galsteer gebral

Die p opgene By on wat kl en sy b en sag buikhoo

Blo ensiele

Urin skopie was gr

Die Rögen geen n

Prot per ins

Ser enheids

Ser Alka troebel

Die

urine-

1958 i

die bloedingsneiging in hierdie geval nie as 'n absolute kontra-indikasie tot dialisering beskou nie.

Die afwezigheid van 'n hiperkalemiese elektrokardiografiese beeld en die teenwoordigheid van 'n hoë kaliumwaarde het ons laat voel dat daar primêre miokardiale skade teenwoordig was. Die post-mortem ondersoek het dan ook 'n histologiese beeld van miokarditis aangedui.

By hierdie pasiënt het die gebruik van die kunsnier bygedra om die gevolge van die nierskade tydelik te verbeter en het die nierfunksie oënskynlik later redelik herstel. Die gebruik van die kunsnier het egter geen invloed op die algemene siektestoestand gehad nie.

Geval 6

'n Blanke man, 75 jaar oud, is toegelaat op 6 November 1958. Daar was 'n geskiedenis van geelsug (2 maande) wat toenemend in gearheid was. Daar was ook buikpyn wat nie soos dié van galsteenkoliek gelyk het nie. Die pasiënt het ook voortdurend gebraak en daar was meegaande anoreksie en gewigswerlies.

Die pasiënt is 'n jaар voor hierdie opname ook in die hospitaal opgeneem met 'n kardiale infarksie waarvoor hy behandel is. By ondersoek was die bejaarde pasiënt in 'n toestand van geelsug wat klinies obstruktief voorgekom het. Sy pols 80 per minuut en sy bloeddruk 140/90 mm. Hg. Sy lever was 2 vingers vergroot en sag met 'n egale oppervlakte. Daar was geen vryvog in die buikholte nie en die milt was nie tasbaar nie.

Bloed: Hemoglobien 14 g. %, witselle: 7,150 per c. mm., en differensiële telling normaal. Bloedbesinking 6 mm./eerste uur.

Urine: S.G. 1015, bilirubien +++, urobilinen, mikroskopies 6 tot 8 etterselle en 3 tot 4 rooibloedselle/H.V.V. Daar was granuläre en epiteelsilinders teenwoordig.

Die elektroangiogram toon 'n ou posteroseptale hartinfarkt.

Röntgenfoto's van die borskas en oorsigsfoto's van buik het geen noemenswaardige afwykings getoon nie.

Protrombin indeks 70%. Ten spye van vitamine K-toediening per inspuiting, het dit feitlik onveranderd gebly.

Serumbilirubien 22·1 mg. % en Serumamilase 3·3 Wohlgemuth-eenhede per ml.

Serumproteiene: Albumien 3 g. %, globuliene 2·9 g. %.

Alkaliese fosfatase 2·8 Bodansky-eenhede per 100 c.c., timol-troebelheid 4 eenhede, timolflokkulasie 4 eenhede, en sinksulfaat-troebelheid 6 eenhede.

Die serumelektrolyte en bilirubien, bloedureum asook die urine-uitskeiding word in Afb. 8 uiteengesit. Op 17 November 1958 is daar ook 'n leverbiopsie geneem en die histologiese diag-

nose was dié van 'n chroniese hepatitis. Op 17 November 1958 was die transaminase S.G.P.T. 155 eenhede (normaal 1·45), en die transaminase S.G.O.T. 75 eenhede (normaal 4·40). Die kliniese diagnose was nou hepatitis.

Vanaf 10 November 1958 het die pasiënt geleidelik komateus geword, fetor hepaticus ontwikkel en 'n fladderende tremor gekry. Hy is konserwatief behandel met die diagnose van hepatiese encefalopatie, maar toe sy toestand klaarblyklik nog klinies vererger, is daar op 18 November 1958 besluit om 'n dialise uit te voer ten einde toksiese metaboliete uit te dialiseer. Die pasiënt is 2 uur lank gedialiseer toe die filter uit werking geraak het. Daarna is hy nog 10 uur gedialiseer. Post-dialise bevindings, soos in Afb. 8 uitgebeeld, het nie noemenswaardig verander nie. Daar het ook geen galpigmente deur die membraan na die bad gegaan nie. Klinies het die pasiënt, indien enige verandering te bespeur was, matige verbetering getoon. 'n Gewigsverlies van 1·42 kg. gedurende die dialise, soos met die bedskaaal gemeet, het 'n ultrafiltrasie van 1,420 c.c. vog aangedui.

Die pasiënt is 3 dae na die dialise dood met 'n skielike massiewe, bonste gastro-intestinale bloeding. Outopsie is nie verkry nie.

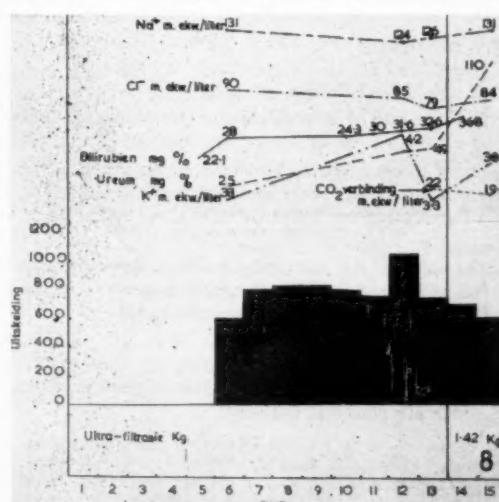
Kommentaar

By dié pasiënt, met 'n hepatitis wat in 'n hepatiese encefalopatie verval het, wat met konserwatiewe behandeling geen verbetering wou toon nie en in 'n bedenklike toestand verkeer het, is dialise aangewend in 'n poging om sy toestand te verbeter. Dit blyk dat die kunsnier geen betekenisvolle invloed op die pasiënt gehad het nie en dat dit waarskynlik nie van waarde is by 'n geval van hepatiese koma sonder nierversaking nie.

BESPREKING

Die gevalle wat hier uitgebeeld is, toon dat ekstrakorporeale dialise met die Travenol-kunsnier die biochemiese veranderinge van nierversaking doeltreffend kan herstel. Groot reekse pasiënte is reeds in verskeie inrigtings op hierdie manier behandel.^{1, 4, 10, 12, 13} Dit is ook die mening van die meeste werkers^{4, 14} dat die kunsnier die mees doeltreffende metode is van dialise. By akute nierversaking is dit duidelik dat hierdie behandeling lewensreddend mag wees, soos in geval 2 geillustreer. Dit is ook duidelik, soos blyk uit die verloop van gevallen 3 en 4, dat akute nierversaking na die 5e dag van anurie in gevaar verkeer indien daar enige kliniese simptome van agteruitgang teenwoordig is, en ook dat die toestand binne enkele ure 'n ernstige wending kan neem. Dit is ook die ondervinding van Salisbury,¹³ en sy aanbeveling dat die kunsnier eerder te vroeg as te laat gebruik moet word, meer ons, is baie belangrik. Sy stellings dat 'n pasiënt met anurie wat 5 dae duur en wat kliniese simptome het in die vorm van neurologiese afwykings, kardiovaskuläre teken, of gastro-intestinale simptome, kwalificeer vir die gebruik van die kunsnier; en dat 'n pasiënt met anurie wat 6 dae duur sonder dat daar van hierdie simptome teenwoordig is, ook kwalificeer vir behandeling met die kunsnier, geniet ook ons ondersteuning.

Die serumkaliumwaardes kan dramaties verminder word en die dringende kardiale komplikasies van hiperkalemie kan die beste op hierdie wyse verlig word. Slegs by 1 geval (Geval 5) het die kaliumwaardes nie gedaal nie. Hier was ons van mening dat daar hemolise plaasgevind het en dat hierdie pasiënt ook meer wyderspreide weefselskade gehad het as gevolg van sy hemorrhagiese diatese. Dit is ook moontlik dat die kunsnier die kalium nie genoegsaam kon laat daal nie. In dié verband is dit interessant om op te merk dat kaliumwaardes in elk geval nie laer as ongeveer 1·6 m. ekw./liter deur die gebruik van dialise afgebring kan word nie, aangesien homostatiese meganisme intree om dit by hierdie waardes



Afb. 8. Serumelektrolyte, bilirubien, bloedureum en urine-uitskeiding—hepatiese koma—(Geval 6).

te handhaaf.¹⁰ Kardiale stilstand as gevolg van kalium-intoksikasie is ook alreeds deur die gebruik van die kunsnier na 'n normale sinusritme teruggevoer.¹⁵

Die waarde van die kunsnier by chroniese nierversaking is twyfelagtig. Soos by geval 1, is daar sekerlik kliniese verbetering—maar slegs van 'n tydelike geaardheid. Dit is ook die ondervinding van ander werkers,⁵ hoewel sommige soos Merrill¹¹ vermeld dat die tydelike verbetering genoegsaam mag wees om die pasiënt vir selfs maande weer uit die hospitaal te laat.

'n Bloedingsneiging saam met akute nierversaking mag as kontra-indikasie dien vir heparinisering en dus vir ekstrakorporeale dialise. Kolff⁸ meld egter dat dit nie 'n absolute kontra-indikasie is nie. In geval 5 is die behandeling toegepas sonder dat dit enige verergering in die hemorrhagiese toestand meegebring het. Metodes om hierdie gevaaar te bowe te kom is ook al voorgestel.³ Hulle bestaan hoofsaaklik daaruit dat die heparien geneutraliseer word deur die gebruik van protamien-sulfaat voordat die bloed weer teruggevoer word na die pasiënt.

Hoewel ons nie 'n soortgelyke ondervinding beskryf kon kry nie, het ons, omrede van geval 6 se toestand, besluit om dialise toe te pas. Sedertdien het daar werk verskyn in dié verband.⁶ Na hierdie enkele ondervinding sou dit blyk dat die gebruik van die kunsnier nie 'n direkte toepassing het by 'n suwer hepatiese komatoestand nie.

Die komplikasies van belang wat na dialise voorkom word ook deur hierdie pasiënte geillustreer. Post-dialise styling in bloeddruk word beskryf⁸ en ook 'n verhoging van kardiale omset.⁴ Die onmiddellike meganisme hiervan word nie begryp nie, maar is tot dusver nie van kliniese betekenis gewees nie. Post-dialise oligurie is 'n bekende verskynsel soos in geval 1 gedemonstreer, en is moontlik die gevolg van 'n verlaging in die bloedureum en die verwydering van die osmotiese diuretiese effek van die nie-absorbeerbare ureum uit die nierbuisies uit.¹¹ Die hemorrhagiese toestand is reeds bespreek en behoort nie as 'n kontra-indikasie vir heparinisering te dien nie.

Besmetting van die insnydingswonde met weerstandbiedende organismes mag 'n belangrike komplikasie uitmaak, en moet voorkom word. Geval 2 het 'n infeksie van hierdie geaardheid opgedoen en dit het slegs met moeite herstel. 'n Ander pasiënt met chroniese nefritis wat 2 dialises ondergaan het, het septiese embolieë na die long ontwikkel. Die gebruik van polieteenbuise, veral as daar perforasies in die kante ingsny word en as hulle hoog in die vena ingeplaas word, mag die aanleiding wees tot long-embolieë van polieteenbuise wat breek. Dit was die ondervinding by 1 pasiënt met chroniese nefritis en uremie, en moet as waarskuwing dien dat die grootste sorg gedra moet word om so 'n komplikasie te voorkom.

Die aanduidings vir die gebruik van die kunsnier word goed saamgevat in 'n inleidingsartikel in *The Journal of the American Medical Association*,² asook deur Salisbury¹² en Parsons en McCracken.¹³ Met ons eie ondervinding daarby, kan die aanduidings soos volg uiteengesit word:

Aanduidings vir die Gebruik van die Kunsnier

Die gebruik van die kunsnier is aangewese (1) om die pasiënt in 'n toestand te plaas geskik vir diagnostiese procedures en operasies, en in gevalle van (2) akute nierversaking, (3) chroniese nierversaking, (4) ekstrarenale uremie, (5) edeem, en (6) vergiftings.

Die besondere aanduidings vir die gebruik van die kunsnier by *akute nierversaking* kan dan ook as volg saamgevat word: (1) serumkaliumwaardes hoër as 7.0 m. ekw./liter soos chemies aangedui of soos deur elektrocardiografiese bepalings voorgestel word, (2) CO₂-verbinding minder as 12.0 m. ekw./liter, (3) 5 dae anurie met simptome, en (4) 6 dae anurie sonder simptome.

L.W. Simptome wat pre-terminale veranderinge aandui, is:

1. *Neurologies.* Die veranderinge in hierdie verband sluit in geestesveranderinge, verwardheid, semistupor tot koma, verhoogde prikkelbaarheid, lewendige diep refleks, enkelklonus, fasikulasie van die spiere om die areola en die skrotum.

2. *Kardio-vaskuläre simptome* sluit in longkrepitasies, luide 2e pulmonale klank, en hartversaking.

3. *Gastro-intestinale simptome* sluit in anoreksie, braking, buikuitsetting en met ileus.

Dit moet beklemtoon word dat hierdie pre-terminale stadia binne enkele ure terminaal kan word en dat permanente nierskade kan voorkom voor die 10e dag van anurie.

OPSUMMING

1. 'n Kort beskrywing word gegee van die werking van 'n Kolff-tipe kunsnier, soos deur Travenol vervaardig en in gebruik geneem is by die Karl Bremer-Hospitaal.

2. Ondervinding met 6 pasiënte word aangehaal om die verskillende gebruiks van die apparaat aan te dui, en om die komplikasies te vermeld.

3. Die gebruik van die kunsnier is definitief aangewese by akute nierversaking, en dit word aanbeveel dat dié vorm van behandeling eerder te vroeg as te laat toegepas moet word.

4. Die gebruik van die kunsnier by gevalle van chroniese nierversaking het slegs twyfelagtige waarde en by hepatiese encefalopatie kon geen waarde aangetoon word nie.

5. Die komplikasies wat mag voorkom is nie ernstig nie. Spesiale sorg moet egter gedra word dat daar nie sepsis plaasvind nie, en dat polieteenbuise wat in die vena geplaas word, nie afbreek en longembolieë veroorsaak nie.

SUMMARY

1. A description is given of the functioning of a Kolff type of artificial kidney, as produced by Travenol and put into use at the Karl Bremer Hospital.

2. The records of 6 patients are presented to illustrate various aspects of the use and complications of this kidney.

3. There is clear indication for the use of the artificial kidney in acute renal failure and it is recommended that this form of treatment be instituted too soon rather than too late.

4. The value of the use of the artificial kidney in chronic renal failure is doubtful, and no benefit appears to be derived from its use in cases of hepatic encephalopathy.

5. The complications which may arise are usually not serious. Special care should, however, be taken to prevent sepsis and the possibility of emboli arising from the polythene tubes which are placed in the veins.

Ons dank aan dr. R. L. M. Kotze, Superintendent van die Karl Bremer-Hospitaal, Bellville, vir toestemming om hierdie bevindinge te publiseer, aan prof. J. N. de Villiers vir verlof om verslae oor pasiënte onder sy toesig te publiseer, en aan dr. C. Retief, van die Afdeling Chemiese Patologie, vir die biochemiese bepalings.

VERWYSINGS

1. Aoyama, S. en Kolff, W. J. (1957): Amer. J. Med., 23, 565.
2. Editorial (1958): J. Amer. Med. Assoc., 166, 642.
3. Gordon, L. A., Simon, E. R., Rukes, J. M., Richards, V. en Perkins, H. A. (1956): New Engl. J. Med., 225, 1063.
4. Harrison, J. H. (1953): J. Urol. (Baltimore), 70, 559.
5. Hollander, G., Sterling, J. A. en Doane, J. C. (1953): *Ibid.*, 69, 753.
6. Kiley, J. E., Pender, J. C., Welch, H. F. en Welch, C. S. (1958): New Engl. J. Med., 259, 1156.
7. Kolff, W. J. (1954): Arch. Intern. Med., 94, 142.
8. *Idem* (1957): Circulation, 15, 285.
9. Malherbe, L. F.: Persoonlike mededeling.
10. Maher, F. T. en Broadbent, J. C. (1958): J. Amer. Med. Assoc., 166, 608.
11. Merrill, J. P. red. Bradley, S. F. (1951): *The Use of the Artificial Kidney*. Transactions of the Third Conference on Renal Function, p. 139. New York: Josiah Macy Jr. Foundation.
12. Parsons, F. M. en McCracken, B. H. (1957): Brit. J. Urol., 29, 424.
13. Salisbury, P. F. (1958): Arch. Intern. Med., 101, 690.
14. Wardener, H. E. de (1958): *The Kidney*. London: J. & A. Churchill Ltd.
15. Wu-Hao, Tu en Crockett, J. E. (1957): J. Amer. Med. Assoc., 165, 1953.
16. Young, J. V. en Daugherty, G. W. (1956): Proc. Mayo Clin., 31, 357.

FEDERAL COUNCIL MEETING

The following is a brief resumé of some of the matters discussed at the 6-monthly meeting of the Federal Council of the Medical Association of South Africa, held at Medical House, Esselen Street, Johannesburg, on 8-10 April 1959. The Minutes of this meeting will be published in a later issue of the *Journal* in compliance with Rule 37 of the Standing Orders and Rules of Council. The Chairman of Federal Council (Dr. J. H. Struthers), presided. Among those present were the President of the Association (Dr. R. Schaffer), the past-President (Dr. H. Grant-Whyte), the Honorary Treasurer (Mr. J. D. Joubert) and the Vice-Chairman (Dr. E. W. Turton), who took the chair during part of the meeting.

FINANCIAL MATTERS

The financial report of the Honorary Treasurer was tabled. Owing to the fact that the auditors were late in preparing the Balance Sheet, it had not been possible to circulate the report to members before the meeting. Members could, therefore, not study the report in advance, and it was moved by Dr. M. Shapiro, and agreed by Council, to defer discussion of the report until the next meeting of Council.

EXECUTIVE COMMITTEE

The following were among the matters dealt with in the report of the Executive Committee:

Appointment of Editor. The post of Editor of the Journals of the Medical Association was advertised in the medical and lay press and, at its meeting held on 3 November 1958, the Head Office and Journal Committee unanimously agreed to recommend to the Executive Committee that Dr. A. P. Blignault be appointed to the post of Editor as from 1 January 1959. This recommendation was submitted to members of the Executive Committee by correspondence, and the Executive Committee also unanimously agreed that Dr. Blignault be appointed. Federal Council confirmed this action.

Assistant Editor. After the assumption of duty as Editor by Dr. Blignault on 1 January 1959, the Head Office and Journal Committee appointed Dr. T. Shadick Higgins to the post of Assistant Editor in a temporary capacity to assist Dr. Blignault. Federal Council resolved that the post of temporary full-time Assistant Editor be advertised.

Transfer of Head Office. After a long and full discussion of the factual statement (prepared by the Secretary) on the financial implications involved in a transfer of the Head Office of the Association from Cape Town to Pretoria, the following motion, proposed by Dr. R. Schaffer and seconded by Dr. Turton, was carried: 'That in view of present circumstances the transfer of the Head Office to Pretoria be not considered at present.'

Sliding scale of subscriptions. The Special Committee appointed by Federal Council for the purpose of investigating the desirability and practicability of instituting a sliding scale of subscriptions to the Association recommended that the subscriptions of interns and practitioners in the first 2 years of post-intern practice (hospital or private) be fixed at £2 2s. 0d. and that all other members pay a minimum subscription of £4 4s. 0d. Federal Council agreed to accept these recommendations with the following exceptions: where both husband and wife are members, one will pay £4 4s. 0d. and the other £2 2s. 0d. and retired practitioners over the age of 65 will pay £2 2s. 0d. It was felt that in view of the recent increase in salary scales, full-time medical officers should not put forward special claims to a reduction of fees, since their emoluments were now more than some men earned in private practice. Federal Council expressed the hope that all full-time

medical officers would cooperate fully in this matter—in their own interests and the interests of the Association. A further statement on this matter will be published in the *Journal* shortly.

Transfer of contract practice work to Pretoria. At its last meeting Federal Council resolved: 'That the Executive Committee be instructed to consider immediately ways and means of transferring the contract practice work to Pretoria as soon as possible.' This problem was again discussed and in the end Federal Council agreed that this matter be left in the hands of the Executive Committee.

Rules for Groups and their congresses. The Executive Committee recommended, and Federal Council agreed, that the congress rules should be amended for clarity, by the addition of the following rule: 'Congresses organized by a Group within the Association must conform to the rules for the general biennial congress of the Association.'

Annual Meeting of the British Medical Association and British Commonwealth Medical Conference. At the meeting of the Executive Committee held in February, the Secretary reported that this Conference of Secretaries of Commonwealth Medical Associations which was to have taken place in 1957, was postponed to July 1959. At the time that the appointment of a representative had been considered for the 1957 Conference, the Federal Council had appointed him to be the Association's representative. He also gave details of the Conference and stated that the Association's share of the expenses would be approximately £325. After a discussion of this matter it was proposed by Dr. M. Shapiro and resolved by Federal Council 'That in view of the present state of the Association's finances the Association shall not send the Secretary to the Conference'. It was agreed that Dr. R. Schaffer, who intended to be in London at that time, be requested to represent the Association this year at the Conference.

Resolutions submitted by the Group of Neurologists, Psychiatrists and Neuro-surgeons. A series of 7 resolutions, passed by the Group at its Annual General Meeting held in Durban in September 1958, was considered and it was noted that the first 3 resolutions had been referred to the Secretary for Health. These resolutions deal with legislation governing control of habit-forming drugs, a commission of enquiry into mental health facilities, and special legislation to deal with psychopathic personalities. It was further noted that the last 4 resolutions had been referred to the Central Committee for Contract Practice. These resolutions deal with additional charges during a course of electro-convulsive therapy, the fee for psychotherapeutic sessions, the administration of anaesthetics by general practitioners and psychiatrists for electro-convulsive therapy, and a medical aid scheme for medical practitioners and their families.

Badges of Office. A request from the Group of Neurologists, Psychiatrists and Neuro-surgeons to the effect 'that the presidents of national groups should have badges of office' was considered but Federal Council agreed to take no action in this matter.

AUGMENTED EXECUTIVE COMMITTEE, TRANSVAAL

Partnerships in relation to hospital appointments. After having considered letters received from the Honorary Secretary of the Southern Transvaal Branch and after a discussion, the Committee resolved to recommend to Federal Council that there be no change in the policy of the Association regarding this matter. Federal Council discussed the matter and various views were expressed. At the end of the discussion the following motion, proposed by Dr. S. Heymann, was carried: 'Federal Council, having reviewed the matter of partnerships in relation to hospital appointments, places on record as a statement of policy in this

regard that medical appointments on hospital staffs be made primarily and essentially on merit.'

HEAD OFFICE AND JOURNAL COMMITTEE

The Committee reported that 5 ordinary and 2 special meetings had been held since the last meeting of Federal Council. Among the matters dealt with by the Committee, were the appointment of the Editor and the Assistant Editor (already mentioned in the report of the Executive Committee).

South African Journal of Laboratory and Clinical Medicine. An attempt was made to obtain additional advertising in order to make the South African Journal of Laboratory and Clinical Medicine available to all members of the Medical Association. Although the reaction from certain advertisers was very encouraging, sufficient support was not forthcoming and the plan had to be dropped for the moment. Further attempts will be made to achieve the desired object.

Office mechanization. After the meeting of Federal Council in September 1958, the Head Office and Journal Committee appointed a Sub-committee to investigate the question of mechanization at Head Office and to ascertain what saving this would effect. The Sub-committee reported to Federal Council that the investigation had been concluded and the Committee put forward a number of proposals. The Committee was satisfied that no major changes were necessary, that no expensive machines were required, but that a definite saving could be effected by departmental reorganization. The report of the Sub-committee, which was supported by full memoranda from the official auditors of the Association and from an independent firm of chartered accountants, was noted by Federal Council.

[BENEVOLENT FUND]

It was noted that the accumulated funds of the Benevolent Fund at present amounted to over £47,000. The Federal Council decided to place on record its appreciation of the following donations to the Fund: £2,500 by the Southern Transvaal Branch, £530 by the Natal Coastal Branch, £100 by Prof. L. J. te Groot, and £59 from the Association of Physicians of South Africa. The Council also noted with appreciation the receipt of legacies from the estates of the late Dr. R. H. Welsh and the late Dr. A. E. Pinniger. During 1958 grants totalling £3,746 were paid to beneficiaries.

Memorial fund. The suggestion made by Dr. J. Abelsohn of Cape Town in a letter to the *Journal* of 21 February 1959, that a central memorial fund be established in memory of distinguished members of the Association, was discussed by Federal Council and tentative views were expressed that it might be possible for the J. S. du Toit Memorial Fund to be augmented in this way by linking it with the names of other 'elder brethren'. It was decided to refer the matter back to the Management Committee of the Benevolent Fund with the request to formulate definite proposals in this respect.

PARLIAMENTARY COMMITTEE

The following are some of the matters that have been dealt with by the Parliamentary Committee since the last meeting of Council: Pensions of self-employed persons, proposed amendment of section 12 of the Motor Vehicles Act, benefit societies formed under industrial agreements, anomalies re salary scales in the Health Department, the desirability of the continued maintenance of specialist registers by the South African Medical and Dental Council. The discussions and resolutions taken by Federal Council on these matters will be fully reflected in the minutes shortly to be published in the *Journal*. At the end of the discussions Dr. H. Grant-Whyte paid tribute to the magnificent work done by the Parliamentary Committee.

ETHICAL MATTERS

Interviews to the press. The Chairman of the Federal Ethical Committee in his report to Federal Council on the work done by his Committee stated that his Committee was greatly concerned by the tendency for medical practitioners to grant interviews to the press regarding special types of treatment. In these interviews the names of the doctors are not mentioned, but the

doctors can always be identified. It was felt that granting interviews of this nature constitutes unjustifiable indirect advertising. Certain definite instances will be investigated by the Committee.

Ethical Rule 21 (3) (Consulting rooms). The Registrar of the South African Medical and Dental Council, in a letter to the Secretary of the Medical Association, stated that his Council has been giving consideration to the desirability or otherwise of deleting or amending Ethical Rule 21 (3). This Rule reads as follows:

(1) Having consulting rooms for private practice with the entrance through, or with the name plate at the entrance to, a chemist's shop.

(2) Sharing consulting or waiting rooms with persons not on the medical or dental registers.

(3) Using in connection with his consulting rooms the term hospital, clinic or any other similar name, which might lead the public to believe that the consulting rooms are part of a hospital, clinic, nursing home or other similar institution or have features differing from those of ordinary consulting rooms.

(Note: The use on name-plates, note paper or elsewhere of a designation such as Dr. X _____ clinic or hospital, is therefore not permissible.)

This matter was fully discussed and various views were expressed. It was felt that the facilities available in hospitals or clinics are often an advantage to doctors and patients but that it should be insisted that the consulting rooms of doctors in such hospitals or clinics should in no way be associated with a hospital or clinic. Federal Council resolved to inform the Registrar of the South African Medical and Dental Council that it is in favour of the retention of Rule 21 (3) in its present form.

CONTRACT PRACTICE

The following are some of the matters that have been dealt with by the Central Committee for Contract Practice:

Medical Aid Societies. A complete list of the approved medical aid societies, including the newly approved societies, is published on page 383 of this *Journal*.

Income ceiling of £2,500. Federal Council agreed that the matter of the admission to medical aid societies of a new member earning more than £2,500 be discussed with representatives of the medical aid societies at a joint meeting.

Medical insurance schemes. After a discussion of this matter, Federal Council resolved 'That this Federal Council welcomes all forms of insurance against illness and that, therefore, Federal Council appoints a special committee on insurance for the purpose of establishing permanent contact with all insurance companies in respect of all their activities. The name shall be the Federal Council Insurance Committee'.

After presenting his report, Dr. L. O. Vercueil informed the Council that owing to unavoidable circumstances he would be forced to resign from the Chairmanship of the Central Committee for Contract Practice and the Workmen's Compensation Act Committee. Federal Council accepted his resignation with regret and expressed its sincere appreciation for the invaluable services Dr. Vercueil had rendered to the Association.

HONOURS

Federal Council decided to award its gold medal for distinguished service to Dr. T. Shadick Higgins. It was further decided to award the Bronze Medal for meritorious service to Drs. Lewis S. Robertson, Seymour Heymann, P. F. H. Wagner and J. N. W. Lousser.

MEDALS

Federal Council noted that the Head Office and Journal Committee had agreed unanimously that the following medals for 1958 be awarded:

The *Hamilton-Maynard Memorial Medal* for 1958 to Dr. David Ordman of Johannesburg for his paper entitled 'Allergy in childhood: Its pattern, control and significance in adult prophylaxis', which had appeared in the *Journal* of 5 April 1958 on page 377. And *The Leipoldt Memorial Medal* for 1958 to Dr. G. F. C. Troskie for his paper entitled 'Kisteuse pneumatoze van die peritoneum', which had appeared in the *Journal* of 15 February 1958 on page 193.

THE COLLEGE OF PHYSICIANS, SURGEONS AND GYNAECOLOGISTS OF SOUTH AFRICA

CONFERMENT OF HONORARY FELLOWSHIP ON HIS EXCELLENCY DR. THE HONOURABLE E. G. JANSEN

The College of Physicians, Surgeons and Gynaecologists of South Africa was inaugurated in August 1956. Since then its work has progressed and it now conducts examinations in medicine, surgery and obstetrics and gynaecology, at 6-monthly intervals, alternately in Johannesburg and Cape Town.

The standard of the examinations was approved by the South African Medical and Dental Council; and the Combined Surgical Colleges of the British Commonwealth granted reciprocity between this College and similar Colleges in the Commonwealth countries.

At a meeting of the College Council last year, it was decided to offer to the Governor-General of the Union, Dr. the Hon. E. G. Jansen, LL.D., an Honorary Fellowship of the College of Physicians of South Africa, which he graciously accepted. This Honorary Fellowship will be conferred on the Governor-General at a ceremony which will be held in the Jameson Hall, University of Cape Town, on Friday evening 8 May 1959.

The procession escorting His Excellency to the platform will include members of the Federal Council of the Medical Association of South Africa; members of the medical faculties of the Universities of Cape Town and Stellenbosch; the Principal of the University of Cape Town, Mr. J. P. Duminy; members of the College Council; members of the clergy, and senior members of the medical profession.

The Mace of the College

The mace of the College will be carried in the procession immediately behind His Excellency and preceding the President of the College. This mace has an interesting history culminating in its first public appearance on this important occasion.

When the College of Physicians, Surgeons and Gynaecologists of South Africa received a grant of Arms from the Royal College of Heralds of London, it was entitled to the use of a crest and a mace. The crest was soon obtained, but it was not until July last year, when Mr. J. M. Edelstein made a contribution towards the procuring of the mace, that this matter could be considered. After some investigation and a great deal of correspondence it was found that the mace would have to be made overseas. It was, however, decided to use South African stinkwood for the staff of the mace.

The design submitted by a firm of gold- and silversmiths, Messrs. Hamilton and Inches, of Edinburgh, Scotland, was accepted and a piece of stinkwood sent to them. This design was executed by Mr. C. de O. Pilkington Jackson, a sculptor in silver, who had in mind that the inner gilded knob of the mace should shine through a pierced silver shell and give the appearance of a torch. He placed a repeat of the *ankh* (a T-cross surmounted by an oval—the emblem of life and fertility, which originated in ancient Egypt as a tide mark on the Nile) at the back of the knob. On either side of the *ankh* there is a protea, while on top of the knob a gilt shield is held in place by a silver springbok. The pierced silver shell also bears the motto of the College, *vincent animo doctrinae* (the spirit of learning will prevail).

The College received a request from the makers of the mace to allow the BBC to make a film of the production of this mace

in order to promote interest in the Silversmiths Guild. This request was granted.

The Ceremony

The members of the procession, in academic robes, will pass down the centre aisle to the platform accompanied by music provided by the South African Naval Band, and when they are all assembled on the platform the band will play 'Die Stem van Suid-Afrika'. This will be followed by a prayer in Afrikaans delivered by The Rev. Dr. A. J. van der Merwe, Moderator of the Dutch Reformed Church in the Cape, after which the members of the College and their guests will be welcomed by Mr. J. P. Duminy, Vice-chancellor and Principal of the University of Cape Town.

Dr. Raymund Theron, a Vice-president of the College, will read the citation for the Governor-General in Afrikaans and Mr. A. G. Sweetapple, the other Vice-president, will then read the citation in English. The presentation of the Honorary Fellowship will then be made to the Governor-General by the President of the College, Prof. G. A. Elliott, and His Excellency will reply.

Included in the programme for the evening is a presentation that will be made to the College of Physicians, Surgeons and Gynaecologists of South Africa by Prof. R. B. Kerr, M.D., Professor and Head of the Department of Medicine, University of British Columbia, Vancouver, on behalf of the Royal College of Physicians and Surgeons of Canada. Professor Kerr is the Sims Travelling Professor for 1959. The President of the College, Professor Elliott, will accept the presentation gift and express his thanks on behalf of the College.

Doctors who have passed the College examinations will be presented with their degrees and diplomas, and after an item of music and a closing prayer by His Grace Archbishop McCann, the procession will leave the platform and the hall, once again to the accompaniment of the South African Naval Band, while the audience will remain standing until the procession and Her Excellency, Mrs. Jansen, have left the hall.



The mace

OFFICIAL ANNOUNCEMENT : AMPTELIKE AANKONDIGING

APPROVED MEDICAL AID SOCIETIES

The following list of approved medical aid societies is published for general information. Members are requested to keep this list for reference because it no longer appears in the tariff book. After each meeting of the Federal Council an up-to-date list is published in the *Journal*, including societies that have been newly approved and omitting those that have been withdrawn.

Medical House
Cape Town
22 April 1959

L. M. Marchand
Associate Secretary

GOEDGEKEURDE MEDIESE HULPVERENIGINGS

Vir algemene inligting word onderstaande lys van goedgekeurde mediese hulpverenigings gepubliseer. Lede word versoek om die lys byterhand te hou want dit verskyn nie meer in die tariefboek nie. Na elke vergadering van die Federale Raad word 'n volledige lys, wat die name van pas-goedgekeurde verenigings insluit en van dié wat onttrek is weglaat, in die *Tydskrif* gepubliseer.

Mediese Huis
Kaapstad
22 April 1959

L. M. Marchand
Medesekretaris

1. A.A. Mutual Medical Aid Society, P.O. Box 9595, Johannesburg.
2. Abercom Group Sick Benefit Society, P.O. Box 715, Port Elizabeth.
3. African Cables Medical Benefit Fund, P.O. Box 172, Vereeniging.
4. African Explosives Medical Aid Society, P.O. Box 1122, Johannesburg.
5. African Homes Trust Sick Fund, P.O. Box 93, Cape Town.
6. African Oxygen Limited Medical Aid Society, P.O. Box 5404, Johannesburg.
7. Afrikaanse Pers Beperk se Siekefonds, Posbus 845, Johannesburg.
8. Alex. Aitken & Carter Medical Benefit Society, P.O. Box 2636, Johannesburg.
9. Algoa Medical Aid Society, P.O. Box 369, Port Elizabeth.
10. Argus Medical Benefit Society (Cape Argus Branch), P.O. Box 56, Cape Town.
11. Argus Medical Benefit Society (Daily News Branch), P.O. Box 1491, Durban.
12. Argus Medical Benefit Society (Star Branch), P.O. Box 1014, Johannesburg.
13. Associated Employers' Medical Aid Society, P.O. Box 7462, Johannesburg.
14. A.T.I. Medical Aid Society, P.O. Box 5057, Boksburg North.
15. Babcock and Wilcox Medical Aid Fund, P.O. Box 545, Vereeniging.
16. Bakers Ltd. European Employees' Sick Benefit Fund, P.O. Box 692, Durban.
17. Bloemfontein Municipal Employees' Medical Aid Society, P.O. Box 288, Bloemfontein.
18. Boatr and Hard Metal Products Medical Aid Society, P.O. Box 9325, Johannesburg.
19. Boksburg Municipal Employees' Medical Aid Fund, P.O. Box 215, Boksburg.
20. Broderick Medical Aid Society, P.O. Box 186, Vereeniging.
21. Building Societies Joint Medical Aid Fund, P.O. Box 5728, Johannesburg.
22. S. Butcher & Sons Ltd. Medical Aid Society, P.O. Box 1004, Durban.
23. Cape Portland Medical Aid Society, P.O. Box 1067, Cape Town.
24. Cape Times Medical Aid Society, P.O. Box 11, Cape Town.
25. Cape Town Municipal Employees' Association Medical Aid Society, P.O. Box 1939, Cape Town.
26. Central News Agency Ltd. Medical Benefit Society, P.O. Box 1033, Johannesburg (excluding Cape Town and suburbs, Durban Municipal area, Johannesburg and Witwatersrand, and Port Elizabeth and Pretoria municipal areas).
27. Chamber of Mines Medical Aid Society, P.O. Box 809, Johannesburg.
28. Civil Service Medical Benefit Association, P.O. Box 176, Pretoria.
29. Consolidated Glassworks Limited Medical Aid and Sick Benefit Society, P.O. Box 562, Germiston.
30. Corner House Insurance Fund, P.O. Box 1056, Johannesburg.
31. Coronation Medical Aid Society, P.O. Box 1517, Durban.
32. Crookes Bros. Ltd. Medical Benefit Fund, 301 Smith Street, Durban.
33. D.F.A. Medical Benefit Society, P.O. Box 610, Kimberley.
34. Dorman Long (P.E.) Medical Aid Society, P.O. Box 9010, Port Elizabeth.
35. Eastern Province Cement Co. Ltd. Medical Aid Society, P.O. Box 2016, Port Elizabeth.
36. E.P. Newspapers Medical Aid Society, P.O. Box 1117, Port Elizabeth.
37. Egnew Medical Aid Society, P.O. Penge, Transvaal.
38. Elwamba Medical Aid Fund, P.O. Box 42, East London.
39. Escom Cape Western Undertaking Medical Aid Society, P.O. Box 117, Cape Town.
40. Escom (N.C.U.) Medical Benefit Society, P.O. Box 30, Colenso, Natal.
41. Escom (N.S.U.) Medical Aid Society, P.O. Box 2408, Durban.
42. Everite Medical Aid Society, P.O. Kliprivier, Transvaal.
43. Federated Employers' Medical Aid Society, P.O. Box 666, Johannesburg.
44. Federation of Master Printers of S.A. Medical Aid Society, P.O. Box 4465, Johannesburg.
45. Ford Medical Aid Society, P.O. Box 788, Port Elizabeth.
46. Friend Medical Aid Fund, P.O. Box 245, Bloemfontein.
47. General Mining (Associated Companies) Medical Aid Society, P.O. Box 1007, Johannesburg.
48. General Motors Medical Aid Scheme, P.O. Box 1137, Port Elizabeth.
49. Germiston Industries Medical Aid Society, 113 Pylon House, Human Street, Germiston.
50. Gledhow-Chaka's Kraal Sugar Co. Ltd. Medical Benefits Fund, 301 Smith Street, Durban.
51. Greaterman's Medical Aid Society (all branches), P.O. Box 5460, Johannesburg.
52. Hollerith Medical Aid Society, P.O. Box 7018, Johannesburg.
53. Hubert Davies Johannesburg Staff Medical Aid Society, P.O. Box 1386, Johannesburg.
54. Sir J. L. Hulett & Sons Ltd. Medical Benefit Fund, P.O. Box 248, Durban.
55. Hunt, Leuchars & Hepburn Ltd. (Transvaal Staff) Medical Aid Society, P.O. Box 47, Johannesburg.
56. Irvine Chapman Medical Aid Scheme, P.O. Box 316, Vereeniging.
57. Iscor Medical Benefit Fund, P.O. Box 450, Pretoria.
58. I.W.S. Medical Aid Society, P.O. Box 6946, Johannesburg.
59. J. W. Jagger & Co. Ltd. Medical Aid Society, P.O. Box 726, Cape Town.
60. Johannesburg Board of Executors' Medical Aid Society, P.O. Box 271, Johannesburg.
61. Klerveldsorp Munisipale Werknemers Siekefonds, Posbus 99, Klerveldsorp.
62. K. & L. Timbers Ltd. Staff Medical Aid Fund, P.O. Box 9, Elandsfontein, Transvaal.
63. Koegas Medical Aid Society, P.O. Koegasbridge, C.P.
64. Krantzberg Mines Medical Aid Society, P.O. Box 18, Omaruru, S.W.A.
65. Kroonstad Munisipale Mediese Hulpvereniging, Posbus 302, Kroonstad.
66. G. H. Langler & Co. Ltd. Medical Aid Society, P.O. Box 3762, Johannesburg.
67. Legal and General Medical Aid Society, P.O. Box 4870, Johannesburg.
68. Mail, Times & Express Medical Aid Society, P.O. Box 1138, Johannesburg.
69. Marley Floor Tile Medical Aid Society, P.O. Box 67, Nigel.
70. L. H. Marthinusen Medical Aid Society, P.O. Box 64, Denver, Johannesburg.
71. Masonite Medical Aid Society, P.O. Box 57, Estcourt, Natal.
72. Max Engineering Medical Aid Scheme, P.O. Box 174, Vereeniging.
73. Medical Aid Society for Transvaal Teachers, P.O. Box 28, Boksburg.
74. Metal Box Company of S.A. Ltd. Medical Aid Society, P.O. Box 7752, Johannesburg.
75. Mosenthal's Staff Medical Aid Society, P.O. Box 1, Port Elizabeth.
76. Municipal Employees' Medical Aid Society (Durban), P.O. Box 625, Durban.
77. Natal Building Society Medical Aid Fund, P.O. Box 947, Durban.
78. Natal Coal Owners' (Durban Staff) Medical Aid Society, P.O. Box 281, Durban.
79. Natal Estates Sick Fund Benefit Society, P.O. Mount Edgecombe, Natal.
80. Natal Industries Medical Aid Society, P.O. Box 1300, Durban.
81. N.T.E. Staff Medical Aid Fund, P.O. Box 39, Pietermaritzburg.
82. National Industrial Credit Corporation Medical Aid Society, P.O. Box 8296, Johannesburg.
83. National Portland Medical Aid Society, P.O. Box 21, Claremont, C.P.
84. New Consolidated Gold Fields Employees' Medical Aid Fund, P.O. Box 1167, Johannesburg.

85. No
86. No
87. No
88. No
89. No
90. Pie
91. Pi
92. Po
93. Po
94. Po
95. Po
96. Po
97. Po
98. Po
99. Po
100. Po
101. Po
102. Po
103. Po
104. Po
105. Po
106. Po
107. Po
108. Po
109. Po
110. Po
111. Po
112. Po

1. Po
2. Po
3. Po
4. Po
5. Po
6. Po
7. Po
8. Po
9. Po
10. Po

85. Northern Assurance Co. Ltd. Medical Aid Society, P.O. Box 8615, Johannesburg.
86. Northern Medical Aid Society, P.O. Box 3437, Johannesburg.
87. Northern Rhodesia European Civil Servants' Medical Aid Society, P.O. Box R.W. 13, Ridgeway, N.R.
88. Norwich Union Life Insurance Staff Medical Aid Society, P.O. Box 1226, Cape Town.
89. Ore & Metal Medical Aid Society, P.O. Box 3548, Johannesburg.
90. Pietermaritzburg Chamber of Industries Medical Aid Society, P.O. Box 365, Pietermaritzburg.
91. Pilkington Group European Medical Aid Society, P.O. Box 111, Springs.
92. Polliack Group Medical Aid Society, P.O. Box 3008, Johannesburg.
93. Pongola Sugar Milling Co. Ltd. Medical Benefit Fund, P.O. Box 194, Durban.
94. Post Office Medical Aid Society, P.O. Box 303, Germiston.
95. Pretoria Municipal Employees' Sick Fund, P.O. Box 408, Pretoria.
96. Pretoria News Medical Benefit Society, P.O. Box 439, Pretoria.
97. Pretoria Portland Cement Co. Ltd. No. 1 Works (Hercules) Medical Aid Society, P.O. Box 405, Pretoria.
98. Pretoria Portland Cement Co. Ltd. No. 2 Works Medical Benefit Society, P.O. Box 7, Slurry, Western Transvaal.
99. Pretoria Portland Cement Co. Ltd. No. 3 Works (Jupiter) Medical Aid Society, P.O. Box 73, Cleveland, Transvaal.
100. Pretoria Portland Cement Co. Ltd. No. 4 Works Medical Aid Society, P.O. Box 26, Orkney, district Klerksdorp.
101. Printing Industry Medical Aid Society, P.O. Box 1993, Pretoria.
102. Prudential Medical Aid Scheme, P.O. Box 1097, Johannesburg.
103. Rand Water Board Sick Fund, P.O. Box 1127, Johannesburg.
104. Randles Bros. & Hudson Ltd. (Durban) Sick Benefit Fund, P.O. Box 1046, Durban.
105. Randles Bros. & Hudson Ltd. (Johannesburg) Employees' Sick Benefit Fund, P.O. Box 2678, Johannesburg.
106. 'Rennie' and 'The Consolidated' Employees' Medical Aid Fund, P.O. Box 1006, Durban.
107. Reynolds Bros. Ltd. Medical Benefits Fund, 301 Smith Street, Durban.
108. E. S. & A. Robinson (Pty.) Ltd. Medical Aid Society, P.O. Box 293, Germiston.
109. Royal-Globe Medical Aid Fund, P.O. Box 317, Cape Town.
110. Safim Medical Aid Society, P.O. Box 233, Vereeniging.
111. Safmarine Medical Aid Society, P.O. Box 2171, Cape Town.
112. Safnit Mills Medical Aid Fund, P.O. Box 11, Jeppestown, Johannesburg.
113. Santam-Sanlam Siektfonds (alle takke), Posbus 1, Sanlamhof, K.P.
114. Schwartz, Fine, Kane & Co. Medical Aid Society, P.O. Box 5069, Johannesburg.
115. Shell Medical Aid Society (S.A.), P.O. Box 2231, Cape Town.
116. S.A. Breweries Medical Aid Society, P.O. Box 1099, Johannesburg.
117. S.A.K.A.V. Sick Benefit Fund, P.O. Box 33, Paarl.
118. S.A. Mutual Fire & General Insurance Co. Ltd. Staff Medical Aid Fund, P.O. Box 516, Johannesburg.
119. S.A. Mutual Life Assurance Society Staff Medical Aid Fund, P.O. Box 66, Cape Town.
120. S.A. Press Association Medical Aid Society, P.O. Box 7766, Johannesburg.
121. S.A. Sugar Association Medical Benefits Fund, P.O. Box 2160, Durban.
122. S.A. Teachers' Association Medical Aid Society, 12 Bellevue Road, Sea Point, C.P.
123. S.A. Torbanite (Boksburg) Medical Aid Society, P.O. Box 5083, Boksburg North.
124. South Atlantic Corporation Medical Aid Society, P.O. Box 4610, Cape Town.
125. Southern Medical Aid Society, P.O. Box 42, Cape Town.
126. Standard Brass Medical Aid Society, P.O. Box 229, Benoni.
127. Steeldale and Union Joinery Medical Aid Society, P.O. Box 1210, Johannesburg.
128. Sun Insurance Office Ltd. Staff Medical Aid Fund, P.O. Box 429, Johannesburg.
129. Syfret's Medical Aid Society, 24 Wale Street, Cape Town.
130. Traduna Medical Aid Fund, P.O. Box 8791, Johannesburg.
131. Transvaal Corundum Associated Asbestos Medical Aid Society, P.O. Box 72, Pietersburg, Transvaal.
132. Transvaal Society of Accountants Medical Aid Fund, P.O. Box 2995, Johannesburg.
133. U.L.A. Medical Aid Society, P.O. Box 4589, Johannesburg.
134. Umzimkulu Sugar Co. Ltd. Medical Aid Fund, P.O. Box 43, Durban.
135. United Banks' Medical Aid Society, P.O. Box 1242, Cape Town.
136. United Building Society Medical Aid Fund, P.O. Box 7735, Johannesburg.
137. University of the Witwatersrand (Johannesburg) Staff Medical Aid Fund, Milner Park, Johannesburg.
138. Vacuum Medical Aid Society, P.O. Box 35, Cape Town.
139. Village Board of Management of Welkom Medical Aid Society, P.O. Box 708, Welkom, O.F.S.
140. Wright, Boag & Head, Wrightson Sick Benefit Fund, P.O. Box 183, Benoni.
141. Yorkshire Medical Aid Society, P.O. Box 2755, Johannesburg.

**MEDICAL BENEFIT SOCIETIES WHICH ALLOW FREE CHOICE OF DOCTOR FOR SPECIALIST SERVICES ONLY:
MEDIESTE BYSTANDSVERENIGINGS WAT VRY KEUSE VAN DOKTER ALLEEN VIR SPESIALISTEDIENSTE TOELAAT**

1. Begbie Medical Benefit Fund, P.O. Box 192, Middelburg, Transvaal.
2. Brakpan Power Station Sick Benefit Society, P.O. Box 1, Brakpan.
3. Breyten Coalfields Benefit Society, P.O. Box 6, Estantia, Transvaal.
4. Broken Hill Mine Employees' Medical Specialist Fund, P.O. Box 45, Broken Hill.
5. De Beers Consolidated Mines Limited Benefit Society, P.O. Box 616, Kimberley.
6. Durban Roodepoort Deep Ltd. Benefit Society, P.O. Box 193, Roodepoort.
7. Jagersfontein Mine Benefit Society, P.O. Box 2, Jagersfontein, O.F.S.
8. Krugersdorp Municipal Employees' Medical Benefit Society, P.O. Box 101, Krugersdorp.
9. Northern Rhodesia Mine Employees' Medical Specialist Fund, P.O. Box 134, Kitwe, Northern Rhodesia.
10. Public Utility Transport Corporation Sick Fund, P.O. Box 9571, Johannesburg.
11. Randfontein Estates Employees' Sick Benefit Society, P.O. Box 37, Randfontein.
12. Roodepoort-Maraisburg Municipal Employees' Association Sick Benefit Society, P.O. Box 217, Roodepoort.
13. Roodepoort-Maraisburg Non-Scheduled Mines' and Industries' Benefit Society, P.O. Box 225, Roodepoort.
14. Rossherville-Maraisburg Benefit Society, P.O. Box 99, Cleve-land, Johannesburg.
15. Sasol Medical Benefit Society, P.O. Box 80, Sasolburg.
16. Simmer Pan Medical Benefit Society, P.O. Box 103, Germiston.
17. Springs Mines Benefit Society, P.O. Box 54, Springs.
18. Tongaat Sugar Company Medical Benefit Scheme, P.O. Box 5, Maidstone, Natal.
19. Transvaal Jewellers' & Goldsmiths' Sick Benefit Fund, P.O. Box 8530, Johannesburg.
20. Tweefontein Colliery Employees' Benefit Society, Tweefontein Colliery, P.O. Coalville, Transvaal.
21. Witbank Coalfields Benefit Society, P.O. Box 26, Witbank.
22. Witbank Power Station Medical Benefit Society, P.O. Box 197, Witbank.

NEW PREPARATIONS AND APPLIANCES : NUWE PREPAREATE EN TOESTELLE

DOLOXENE COMPOUND

Eli Lilly International Corporation announce the introduction of Doloxene Compound (dextro propoxyphene and acetylsalicylic acid compound) and supply the following information:

Composition. Doloxene Compound combines the new non-narcotic analgesic Doloxene (dextro propoxyphene hydrochloride) and A.S.A. Compound (acetylsalicylic acid and acetophenetidin compound). Each pulvule of Doloxene Compound contains: Doloxene 32 mg., acetophenetidin 162 mg., A.S.A. (acetylsalicylic acid) 227 mg., and caffeine 32·4 mg.

Action and uses. Doloxene is equal to codeine in analgesic potency, yet it is better tolerated. Clinically useful doses do not produce euphoria, tolerance, or physical dependence. Side-effects such as nausea and constipation are minimal. Doloxene Compound intensifies effectiveness by combining the analgesic action of Doloxene with the antipyretic and anti-inflammatory benefits of A.S.A. Compound. It is particularly useful in relieving pain associated with recurrent or chronic disease such as neuralgia, neuritis and arthritis, as well as acute pain of traumatic origin.

Administration and dosage. 1 or 2 pulvules every 6 hours as required. Doloxene is supplied in bottles of 20 and 100 pulvules.

POLARAMINE SYRUP MALEATE

Scherag (Pty.) Ltd. announce the introduction of Polaramine Syrup and supply the following information:

Each teaspoonful (5 c.c.) of Polaramine Syrup contains 2 mg. dextro-chlorpheniramine maleate.

Indications. Polaramine Syrup is indicated particularly for paediatric management of allergic conditions responsive to oral antihistamines. It is also a practical dosage form for adult patients when liquid medications are preferred or specifically indicated. Conditions responsive to Polaramine Syrup include hay fever, vasomotor rhinitis, angio-oedema, urticaria, drug and serum reactions, food allergies, atopic and contact dermatitis, allergic eczema, pruritus ani and vulvae, pruritus of nonspecific origin, and insect bites, as well as in selected cases of migraine headache and asthma.

Advantages. Polaramine Syrup offers the advantage of highest clinical effectiveness in lower dosages than other antihistamines. Side-effects are virtually absent. Its unique apricot-mint flavour assures ready acceptance by patients of all age groups, especially children. Compatibility with a wide variety of medicinals permits the use of Polaramine Syrup in a compounded prescription with many adjuvant medications for control of allergies and associated conditions.

PASSING EVENTS : IN DIE VERBYGAAN

The College of Physicians, Surgeons and Gynaecologists of South Africa announce the visit of Prof. R. B. Kerr, Professor of Medicine at the University of British Columbia, Vancouver, who is the Sims Travelling Professor for 1959. Professor Kerr will lecture on 'Acute renal failure' in the Harveian Theatre of the Medical School, University of the Witwatersrand, Johannesburg, at 8.15 p.m. on Thursday 28 May 1959.

* * *

South African Paediatric Association (M.A.S.A.). A meeting of the Cape Town Sub-group of this Association will be held on Tuesday 5 May in the Lecture Theatre, Red Cross War Memorial Children's Hospital, Rondebosch, Cape, at 8.15 p.m. The meeting will take the form of a symposium on 'Malnutrition and kwashiorkor' and the speakers will be Prof. F. J. Ford, Drs. J. D. L. Hansen, P. M. Smythe and Miss A. Moodie. Members of the Cape Western Branch (M.A.S.A.) are invited to attend this symposium.

* * *

Cape Western Branch (M.A.S.A.). Prof. R. B. Kerr, Professor of Medicine, University of British Columbia, Vancouver, who is the Sims Travelling Professor for 1959, will address a meeting held under the auspices of the College of Physicians, Surgeons and Gynaecologists of South Africa in the Physiology Lecture Theatre, Medical School, Observatory, Cape, on Tuesday 12 May

Dosage. The dosage for Polaramine is, $\frac{1}{2}$ teaspoonful 3 or 4 times a day for infants, $\frac{1}{2}$ teaspoonful 3 or 4 times a day for children, and 1 teaspoonful 3 or 4 times a day for adults. Polaramine Syrup (2 mg./5 c.c.) is available in bottles of 4 and 16 oz.

TRIAMINIC

Westdene Products (Pty.) Ltd. announce the introduction of Triaminic Bitabs, produced by Wanders of Switzerland, and supply the following information:

Triaminic represents a new concept in the treatment of the common cold. It provides prompt and effective relief orally for the pathological conditions found in nasal congestion. Consisting of a decongestant and two well-tried and compatible histamine antagonists, Triaminic gives good to excellent results in 90% of patients suffering from the common cold, nasal allergy or post-nasal discharge.¹

The 'drying' and decongestant action is effectively provided by phenylpropanolamine which has been shown to have a more prolonged effect with less central stimulation than ephedrine. The allergic symptoms are combated by the use of two anti-histamines in combination, which broadens the therapeutic spectrum and at the same time decreases the possibility of side actions.² Dizziness and drowsiness may occasionally occur but normally are sufficiently mild to permit continuation of medication with adjustment of dosage.

To facilitate administration and to provide 'around-the-clock' freedom from symptoms Triaminic is made available in special time-release tablets. Bitabs consist of a tablet within a tablet. Half of the tablet is incorporated in the outer layer which dissolves in minutes to give approximately 3-4 hours of action. After about 3-4 hours the inner core disintegrates to give additional 3-4 hours relief. Thus freedom from symptoms is achieved on a dosage of one Triaminic Bitab 3 times a day.

Triaminic replaces nose-drops, sprays and inhalers for the prompt and prolonged relief from symptoms of the common cold and nasal allergies. Each Bitab keeps nasal and paranasal passages clear for 6-8 hours without rebound congestion and other side-effects of topical treatment. Oral administration provides better distribution via the blood stream, longer duration of action and furnishes decongestion in areas that cannot be reached by topical administration.

Triaminic is available in bottles of 12 or 20 Bitabs. Samples and further details may be obtained from the sole South African Distributors—Westdene Products (Pty.) Ltd., P.O. Box 7710, Johannesburg.

1. Lhotka (1957): Illinois Med. J., 112, 259.

2. Hubbard, T. F. and Berger, A. J. (1957): Ann. Allergy, 10, 484.

at 8.15 p.m. The subject of Professor Kerr's address will be 'Late complications of diabetes mellitus'.
* * *

Red Cross War Memorial Children's Hospital, Rondebosch, Cape. The next meeting in the Postgraduate Seminar Series of lectures, held under the auspices of the University of Cape Town, Department of Child Health, will be held in the lecture theatre of this hospital on Wednesday 6 May at 5 p.m. Dr. S. Stein will speak on 'Some common and some uncommon skin disorders'. All practitioners are welcome.
* * *

Research Forum, University of Cape Town. A meeting of Research Forum will be held on Tuesday 5 May at 12 noon in the large A-floor lecture theatre, Groote Schuur Hospital, Observatory, Cape. Dr. A. van Zyl will speak on 'Thyroid function in relation to bile lipids and bile salts. An experimental approach using bile duct cannulated rats'. All interested are invited to attend this meeting.
* * *

Tak Wes-Kaapland, Afdeeling Karoo (M.V.S.A.). Op 21 Maart het 'n span kollegas van die Tak Wes-Kaapland na Beaufort-Wes afgereis op uitnodiging van die Afdeeling Karoo. Die span het bestaan uit drs. M. Jordaan, J. de Wet, J. Munro Gold en J. P. Roux, en was vergezel van hul egenotes. In die middag het hulle lesings gelewer in hulle onderskeie vakke terwyl die vrouens

'n baie aand wat buitekan in hulle l

Exhibit recently hold an

Land M.D. tions. sity E A book In his written of 6 vo to the The Ages, A sch there m reprints the Re Joha Final care in This deliver Tropic

Path M.D. and Lou In this from t the sa the ad previ writer

PROT To the the qu partic matter Coordin Provin I ha which again sente bility'

The ciatio letter mente civil a

In office they be br fessio

'n baie aangename middag op 'n plaas deurgebring het. In die aand was daar 'n besondere genoeglike dinne by die Motel net buitekant Beaufort-Wes. Die span het hy die plaaslike kollegas in hulle huise oorgebly en die Sondag na Kaapstad teruggekeer.

* * *

Exhibition of Shell Craft. Dr. Morris J. Cohen, of Durban, who recently returned from a trip to the Far East and Japan, will hold an exhibition of his shell-craft hobby entitled 'Shell magic',

in the foyer of the Public Library, Johannesburg, from 4-15 May. The exhibition is sponsored by the Africana Museum and will be opened by the Hon. Colin Stamp. Many of the new figures will have eastern motifs and will embody rare and beautiful shells from Japan, the Philippines, Okinawa, and Zanzibar. Admission to the exhibition is free. Dr. Cohen will be pleased to meet medical colleagues, their families and friends, and to see his former professional associates from Johannesburg.

BOOK REVIEWS : BOEKBESPREKINGS

LANDMARKS IN THE HISTORY OF HYGIENE

Landmarks in the History of Hygiene. By Henry E. Sigerist, M.D., D.Litt., LL.D., D.Sc., F.R.C.P. Pp. ix+78. 4 illustrations. 12s. 6d. London, New York, Toronto: Oxford University Press. 1956.

A book by Sigerist is an event, and this book is no exception. In his first chapter he deals with Galen's *Hygieina*, which was written soon after the death of Marcus Aurelius and was a work of 6 volumes. He points out that its scope was very similar to the Golden Age of the Greeks.

The 2nd chapter deals with a popular book in the Middle Ages, *Regimen Sanitatis Salernitatum*, setting out the views of the school of Salerno and of which 'it has been estimated that there must be between 500 and 1,000 editions, translations and reprints'. The 3rd chapter deals with the quest for long life in the Renaissance, while the 4th touches on the life and writings of Johann Peter Frank, a pioneer in Social Medicine.

Finally Dr. Sigerist described the changing pattern of medical care in a changing world.

This book is made up of the Heath Clark lectures of 1952 delivered by the author at the London School of Hygiene and Tropical Medicine of the University of London.

A.H.T.

PATHOLOGY

Pathology. 3rd edition. Edited by W. A. D. Anderson, M.A., M.D., F.A.C.P., F.C.A.P. Pp. xv+1402. 1,294 illustrations and 11 colour plates. South African Price, £6 16s. Od. St. Louis: The C. V. Mosby Company. 1957.

In this edition of Anderson the format has changed very little from the previous one. The content and presentation are much the same except for certain additions. Notable amongst these is the addition of two new chapters. The chapter on the pituitary, previously written by John E. Kraus, has been completely rewritten by Dorothy Russell, and that on the female genitalia,

written previously by Walter Schiller, has also been rewritten by A. T. Hertig and Hazel Mansell. Both are excellent contributions and must enhance the value of this already outstanding book. In the chapter on the adrenal, Gorman Hills collaborating with W. A. D. Anderson replaces J. A. Saxton. By including the many advances in adrenal pathology that have been made since the publication of the previous edition, this chapter too has virtually been rewritten.

The following are other less obtrusive additions. In the chapter on virus diseases there is now included a few paragraphs on the A.P.C. and ECHO (Orphan) viruses. In the chapter on cardiovascular diseases there are additions to the pathology of rheumatic fever and to the pathology of the heart in dietary and deficiency diseases; the aetiology of arteriosclerosis has been brought up to date with a detailed survey which includes contributions that have come from South Africa; and there are additions to the pathology of arteritis. In the chapter on the kidney to general changes encountered in uraemia have now been included. And in the chapter on blood diseases much of the information on the haemolytic anaemias is also new. Further, 50 new illustrations have been included in the new edition. Many of the references have been brought up to date, and it is interesting to note that some of these are of the same year of publication as the new edition—1957. It is significant that though these alterations are mainly in the form of additions yet the size of the book has not increased appreciably; the new edition contains only 9 pages more than the previous one.

Since its first publication in 1948 Anderson has come to occupy a unique position, which this 3rd edition maintains. It has become an indispensable book of reference to pathologists, because it is the only modern text-book which gives a detailed account of the pathology of all organs. For similar reasons postgraduate students in all spheres of medicine have come to regard it as a standard work on pathology. Perhaps for the undergraduate it exceeds the requirements, and for him more fundamental books are to be recommended.

C.J.U.

CORRESPONDENCE : BRIEWERUBRIEK

PROTECTION FOR FULL-TIME MEDICAL PERSONNEL

To the Editor: Some time ago the Federal Council considered the question of the protection of full-time medical personnel, particularly those employed in the Government Service. The matter was referred to the Central Health Services and Hospitals Coordinating Council, on which the Central Government and the Provincial Administrations are represented as constituent bodies.

I have now received a letter from the Secretary of that Council which states 'that the abovementioned matter was recently again considered by the Council, and it was decided that the last sentence of the resolution, viz. "They accept their own responsibility" should be deleted.'

The resolution now reads as follows: "That the Medical Association of South Africa be informed that the contents of their letter were referred to the constituent bodies who have commented that their medical personnel are not insured against any civil actions which might be brought against them."

In the circumstances I would again advise all full-time medical officers, who are employed by these Administrations, to see that they are adequately protected against civil actions which might be brought against them as a result of the exercise of their profession.

The Association has made arrangements with 2 organizations

to provide protection—the Medical Protection Society of London and the Atlas Assurance Company. Further information may be obtained from the Association's office, P.O. Box 643, Cape Town.

Medical House
35 Wale Street
Cape Town
21 April 1959

A. H. Tonkin
Secretary

THE DISEASE OF ROAD ACCIDENTS

To the Editor: Mr. J. G. du Toit's article¹ on the above subject has my whole-hearted support. People are maimed and killed daily. Families are wiped out, the reality and security they knew are suddenly shattered and their labours, efforts and planning wasted. This ever-growing threat to life, limb, security and sanity, this violence and murder unleashed on the innocent road users in time of peace, calls for decisive action. There has been enough talking. For all we have done as a profession to prevent this disease, we can hang our heads in shame.

This endemic disease, far more devastating than the most formidable epidemic diseases, has other profound effects on our society. Our morality has deteriorated to such an extent that we tolerate with apathy and indifference this state of unchecked violence and murder on our highways and by-ways.

There was a time when man or beast, running amok, was treated summarily by self-respecting citizens. Now there is a funeral for the victim, suffering and misery for his family; and for the culprit, kid glove methods, and a legal system riddled with loop-holes.

We can make amends by the immediate formation of a special committee to deal with this vital problem, as suggested by Mr. du Toit; a committee that will demand protection for the pedestrians and careful drivers, and heavy punishment for those who disobey 'the rule of the road'.

G. Apostolides

'Riversmead'
P.O. Izotsha, Natal
16 April 1959

I. du Toit, J. G. (1959): S. Afr. Med. J., 33, 296.

DIE KUX-OPERASIE

Aan die Redakteur: Na aanleiding van 'n berig in 'n Transvaalse dagblad van 4 April insake 'n spesifieke toets wat op 'n pasiënt, wat die sogenaamde Kux-operasie ondergaan het, uitgevoer is ten einde vas te stel of hy nog aan senuspanning blootgestel is, sal ek bly wees as ons geleerde vriende van Pietersburg ons deur middel van u *Tydskrif*, laat weet hoe om die toets uit te voer.

Ons hier in die Bosveld kry net elke 2 weke pos—dalk het ons nog net nie daarvan te hore gekom nie.

M. H. Veldman

Heystekstraat 46, Rustenburg
10 April 1959

DIE KUX-OPERASIE

Aan die Redakteur: Dankie vir u Hoofartikel oor die Kux-operasie in die *Tydskrif* van 21 Maart 1959.

In die Transvaal het die pers weereens groot verwarring onder die publiek geskep. Volgens berigte in die dagbladpers is die eerste operasie van dié aard, 'n Kux-operasie, op 'n alkoholis uitgevoer. In die pers is meegeedeel: 'Die uiters delikate en hoogs gespesialiseerde operasie is uitgevoer deur 'n span van 3 geneesherre van wie een 'n geruime tyd voorste onder dr. Kux gestudeer het, waar hy self ook die operasie ondergaan het'. Verder het die volgende mededeling in die pers verskyn: 'Die Suid-Afrikaanse Vereniging vir Alkoholisme in Noord-Transvaal (S.A.V.A.N.T.) het die betrokke geneesherre versoek om die operasie te doen, en die alkoholis, Francois, was gewillig om proefkonyne te wees. Die geneesherre het reeds meer as 100 operasies van dié aard suksesvol uitgevoer. Die alkoholis, Francois, is feitlik klaar genees van sy alkoholistiese neigings. Navrae reën op die geneesherre en 'n verdere alkoholisi van die Rand is ook reeds geoperereer met selfs beter resultate as in die eerste geval.'

Tot sover die berigging. Laat ons nou die aangehaalde berigte, wat as sensasionele joernalistiek beskou moet word, ontleed:

1. Sover bekend word die operasie deur 'n algemene praktisyn uitgevoer wat nie hoogs gespesialiseerde 'opleiding' gehad het nie. Hy het 'n kort tydjie by dr. Kux deurgebring waar hy self ook die operasie ondergaan het.

2. Die S.A.V.A.N.T. ontken enige verantwoordelikheid in hierdie verband soos blyk uit die volgende berig: 'In the meantime the Chairman of the S.A.V.A.N.T., Dr. C. J. H. Brink, has sent the following telegram to the National Council for Alcoholism: "Executive Committee S.A.V.A.N.T. dissociates itself from the report and publicity which originates from the patient himself about the Kux operation for alcoholism"'.

3. Dit blyk dat die proefkonyne, die alkoholis, ook 'n joernalis is wat self die artikel geskryf het. Dit wil dus vir my voorkom of hierdie dranksugtige joernalis ongeregverdigde publisiteit verleen het aan 'n groep geneesherre ten opsigte van 'n hoogs twyfelagtige metode van behandeling (vir alkoholisme) waarvoor daar tot nog toe geen fisiologiese regverdiging bestaan nie. Daarby kom die feit dat die geneesheer (soos in die pers gerapporteer) sou gesê het dat hy binne 'n week in staat sou wees om te sê of die alkoholis genes is.

Dit lyk vir my of hierdie soort optrede en hierdie soort berigging—wie ook al daarvoor verantwoordelik mag wees—daartoe bydra om die hele mediese professie goedkoop te maak en te verlaag tot die peil van kwaksalwery.

Medikus

Transvaal
21 April 1959

DIE KUX-OPERASIE

Aan die Redakteur: Graag wil ons 'n paar aanmerkings maak oor die Hoofartikel wat verskyn het in die *Tydskrif* van 21 Maart en daarby ons eie ondervinding van meer as 100 gevalle wees. Ons hoop om binne 'n jaar oor gedetailleerde besonderhede van voorstudie van pasiënte en die nasorg oor 'n jaar of wat te beskik.

Eerstens wil ons heelhartig met die inhoud van die artikel saamstem, veral met betrekking tot die volgende punte:

1. Die ingreep is 'n uiters delikate prosedure; die sukses daarvan hang uitsluitlik af van die kennis, ondervinding, vaardigheid en deeglikheid van die operator.
2. Die operasie, hoewel 'klein', kan alleen in 'n volledig-toegeruste hospitaal gedoen word met onmiddellik-beskikbare faciliteite vir torakotomie, bloedoorligting en hartmassing.

3. 'n Ervare narkotiseur is, veral in gevalle van astma, essensieel. Hier maak die hoogte van die vagotomie 'n verskil'; alleen 'n hoë vagotomie, voor die longvoorsiening van hierdie senuwee vertak, is van waarde. Hiervoor is 'n eensydige intubasie met afsondering (cuffing) van die teenoorgestelde long nodig sodat die betrokke long totaal gekolbeer is en geen hindernis bied in die torakoskopiese veld nie.

4. Om die wetenskaplike peil te behou, is 'n volledige rekordkaart van elke geval, met soveel as moontlik spesiale ondersoek as kontroles, nodig. Hierdie essensiële maatreël is, selfs vir ons algemene praktisyne, nie moeilik om na te kom nie, deurdat: (a) die operasie, met geringe modifikasie vir astma, 'n standaard-operasie is, naamlik 'n simpatiko-vagotomie, en (b) die indikasiegebied van die operasie nie 'n ontelbare hoeveelheid spesiale ondersoekte, wat andersins vir die publiek te 'n groot finansiële las sou bedra, verg nie. Om die operasie egter te doen sonder om die gevalle voor en na die operasie volledig te diagnostiseer en op te volg, sou, veral in hierdie stadium, 'n onvergeeflike fout wees.

'n Verdere besprekingspunt wat uit u artikel voortvloei is die onsekerke fisiologiese grondslag waarop die operasie berus. So word daar selfs in die 1940-uitgawe van Samson Wright se *Applied Physiology* die gevole beskrywing van totale onderbreking van diesimpatiese senuweestelsel by die kat en die hond. Daar word gevind dat, na volledige simpatektomie op hierdie diere, met emosionele prikkeling die bloedsuiker normaal bly, die rooiselstelling nie verhoog nie en die bloeddruk baie minder styg as by kontrole-diere. Hierdie diere kan hulself ook nie so vinnig aanpas by noodoestande as kontrole-diere nie. Volg ons die evolusie verder, dan vind ons dat die noodoestande van die kat en hond met hulle kondisioneerde veg- of vlugverskynsels byna verdwyn het in die moderne wêreld. Noodtoestande verskyn nie in 'n oogwinkel nie—redeoorheers kondisionering en die autonome senuweestelsel het, in teenstelling met dié van die dierewêrde, 'n luiteklerige lewe van 6 uur per dag se regulerende van normale aanvraag na bloed, normale prikkeling op vasgestelde tye vir sekresies na verskillende dele van die liggaam en normale tot subnormale prikkeling vir die instandhouding van die hormone (geslagshormone of andersins). Verder sit die autonome stelsel met 'n vryetydsbestedingsprobleem op hande, en die probleem is net so groot as die derglike probleem van sy baas. Die gevolge is waarskynlik diesselfde—altwee doen kwaad!

Hoewel hierdie punt op 'n 'ligfantasië' manier bespreek is, is, eiernaardig genoeg, gevind dat die newe-effekte van 'n simpatektomie baie van hierdie lighartigheid bewys. Pasiënte wat voorheen gedurig gespanne was, moeilik tot besluite kon kom, liggeraak en 'n algemene 'senuwruuk' was, tesame met hulle verskeie organiese simptome, het sielkundig dramaties verbeter met simpatektomie of simpatiko-vagotomie.

Tot dusver is oor die 100 gevalle van simpatektomie en simpotikovagotomie reeds deur ons as 'n groep gedoen sonder enige sterfgevalle of komplikasies. Ons resultate is só belowend dat ons voel dat hierdie ingreep waarskynlik 'n permanente plek in medisyne sal inneem, nieteenstaande die ongunstige metode van introduksie wat die ingreep gehad het. As slotpunt voel ons egter weer genoedsaak om te waarsku teen die idee dat die operasie 'n klein ingreep is—dit bly alleen 'n klein ingreep in die regte hande en onder die regte omstandighede. Selfs 'n bekwame torakale chirurg sal hierdie 'operasietjie' van nuuts af moet aanleer.

Posbus 330 Pietersburg 15 April 1959	T. de Bruin, M.B., Ch.B. R. Hauptfleisch, M.B., Ch.B. A. A. du Toit, M.B., Ch.B. J. Z. Moolman, M.B., Ch.B., D.P.H.
--	--